MISSOURI STATE BOARD OF EDUCATION AGENDA ITEM: April 2016

CONSIDERATION OF MISSOURI LEARNING STANDARDS

STATUTORY AUTHORITY:	☐ Consent Item ☒ Action Item ☐ Report Item
Sections 160.514 and 161.092, RSMo	

DEPARTMENT GOAL NO. 1:

All Missouri students will graduate college and career ready.

SUMMARY:

House Bill 1490 (now Section 160.514, RSMo) was signed into law in July of 2014. The law addresses academic performance standards for Missouri's students and outlines a process which must be followed whenever the State Board of Education develops, evaluates, modifies, or revises academic performance standards or learning standards. In accordance with the law, the State Board convened separate work groups in English language arts, mathematics, science and social studies to develop and recommend new learning standards. The workgroups submitted their recommendations to the State Board of Education in October, 2015.

The law also states that the State Board of Education shall solicit comments and feedback on the academic performance standards or learning standards from the Joint Committee on Education and from academic researchers. The Department received many comments from these sources, as well as from educators and the general public which have been incorporated into the workgroup product where appropriate. The attached proposed Missouri Learning Standards: Grade- and Course-Level Expectations will be presented for the State Board's approval.

PRESENTER:

Blaine Henningsen, Assistant Commissioner, Office of College and Career Readiness, will assist with the presentation and discussion of this agenda item.

RECOMMENDATION:

The Department recommends that the State Board of Education approve the Missouri Learning Standards: Grade- and Course-Level Expectations as presented.

Missouri Learning Standards

Update

Presentation for
State Board of Education

April 19, 2016

Missouri
DEPARTMENT OF ELEMENTARY & SECONDARY
EDUCATION™

Show-Me Standards

Knowledge

A foundation in reading, writing, mathematics, world and American history, forms of government, geography, science, health/physical education and the fine arts – should also be incorporated into courses in career and technical education and practical arts.

Performance

The ability of students to apply their knowledge and skills to the kinds of problems and decisions they will likely encounter after they graduate.

Missouri Learning Standards

Grade- and Course-Level Expectations in:

- Agriculture and natural resources
- Business and information technology
- **English language arts**
- Fine arts
- Health/physical education
- Health services
- Human services
- Industrial and engineering technology
- **Mathematics**
- **Science**
- **Social studies**

Missouri Revised Statutes 160.526

In establishing, evaluating, modifying and revising the academic performance standards, learning standards, and the statewide assessment system…the state board of education shall consider the work that has been done by:

- other states
- recognized regional and national experts
- professional education discipline-based associations
- other professional education associations
- the Department of Higher Education's curriculum alignment initiative
- any work in the public domain

Action To Date

- Reviewed the proposals submitted by the work groups
- Reviewed suggestions/issues that were identified through the commenting process
- Reviewed other information as mandated by law
- Prepared recommendation for Board approval
  - Adjusted placement of expectations in K-5 Science within grade bands
  - Final edits and formatting

English Language Arts Examples

Changes from MLS

- Embedded language expectations in writing
- Provided more emphasis on research
- Added cursive writing to K-5

Mathematics Examples

Changes from MLS

- Modified the coding system that organizes the expectations
- Reorganized kindergarten through grade 2 expectations
- Reorganized the high school expectations into traditional high school mathematics courses

Science Examples

Changes from MLS

- Moved from discrete facts to application-based expectations
- Fewer expectations with higher level of complexity and rigor
- Moved Inquiry from stand alone expectations to embedded application

Social Studies Examples

Changes from MLS

- Emphasized processes of social science thinking
- Changed format to promote inquiry approaches in K-5 and 6-12
- Shifted the introduction to Missouri history from 4th grade to 3rd grade to provide opportunities for additional concepts of social studies in grades 4-12

RECOMMENDATION

- April Board Meeting – Board to take action on standards

Next Steps: State

Ancillary Materials Development

Curriculum Frameworks	Required of DESE by Missouri Statute District use - Optional
Glossaries	District use - Optional
Crosswalks comparing new standards to current MLS	District use - Optional
Resources to support curriculum development, upper-level course planning, etc.	District use - Optional

Next Steps: State

Professional Development

2016-2017 school year	
Two-day summer professional development sessions examining the new expectations and exploring instructional practices in English Language Arts, Mathematics, Science and Social Studies – including Fine Arts integration (beginning in June and July, followed by one-day sessions in the fall and winter)	District Use - Optional

Next Steps: State

Assessment Development

Grade-level English Language Arts and Mathematics (grades 3-8)	Required by ESSA
Grade-level Science (once in elementary, once in middle school)	Required by ESSA
English Language Arts, Mathematics, and Science (once in high school)	Required by ESSA
American Government End-of-Course Exam	Required by MSIP 5
Algebra II, American History, English I, Geometry, Personal Finance, Physical Science End-of-Course Exams	District use - Optional
Interim Assessments in English Language Arts and Mathematics (grades 3-8)	District use – Optional
End-of-Course pre-tests	District use - Optional

Next Steps: District

Adopt or develop a written curriculum designed to ensure that students attain the knowledge, skills and competencies established by the new learning standards/expectations	Required by Missouri Statute
Review U.S. and Missouri Constitution tests for alignment with new Social Studies expectations - make updates/revisions if necessary	Optional
Review district-developed formative assessments for alignment to new learning standards/expectations-make updates if necessary	Optional

Next Month

- May Board meeting – Assessment Development Plan

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K-5 English Language Arts
Missouri Learning Standards: Grade-Level Expectations

Missouri Department of Elementary and Secondary Education
Spring 2016

DRAFT

1	Develop and apply skills to the reading process.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A	With assistance, develop and demonstrate reading skills in response to read alouds by:	Develop and demonstrate reading skills in response to reading text and read alouds by:	Develop and demonstrate reading skills in response to text by:	Develop and demonstrate reading skills in response to text by:	Develop and demonstrate reading skills in response to text by:	Develop and demonstrate reading skills in response to text by:
Comprehension **6-12 Correlation Reading Literary 1A, Reading Informational 1A**	a. predicting what might happen next in a text based on the cover, title, and illustrations b. asking and responding to questions about texts read aloud c. retelling main ideas or important facts from a read aloud or familiar story d. connecting the information and events of a text to experiences e. recognizing beginning, middle, and end	a. predicting what will happen next using prior knowledge b. asking and responding to relevant questions c. seeking clarification and locating facts and details about stories and other texts d. retelling main ideas in sequence including key details e. recognizing beginning, middle, and end f. monitoring comprehension and making corrections and adjustments when that understanding breaks down	a. using text features to make and confirm predictions, explain why not confirmed b. asking and responding to relevant questions c. seeking clarification, and using information/ facts and details about texts and supporting answers with evidence from text d. retelling a story's beginning, middle, and end and determining their central message, lesson or moral e. monitoring comprehension and making corrections and adjustments when understanding breaks down	a. explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story b. draw conclusions and support with textual evidence c. summarizing a story's beginning, middle, and determining their central message, lesson or moral d. monitoring comprehension and making corrections and adjustments when understanding breaks down Continue to address earlier standards as needed and as applies to more difficult texts.	a. drawing conclusions, inferring by referencing textual evidence of what the text says explicitly as well as inferences drawn from the text b. drawing conclusions by providing textual evidence of what the text says explicitly c. monitoring comprehension and making corrections and adjustments when understanding breaks down	a. drawing conclusions, inferring by referencing textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text b. drawing conclusions by providing textual evidence of what the text says explicitly as well as inferences drawn from the text c. monitoring comprehension and making corrections and adjustments when understanding breaks down

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1	**Develop and apply skills to the reading process.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Vocabulary** **6-12 Correlation Reading Literary 1B, Reading Informational 1B**	With assistance, develop an understanding of vocabulary by: a. identifying and sorting pictures of objects into conceptual categories b. demonstrating understanding of opposites (antonyms) c. distinguishing meaning between verbs describing the same action d. using a picture dictionary to find words e. using words and phrases acquired through conversations, reading and being read to and responding to texts	Develop an understanding of vocabulary by: a. using common affixes to figure out the meaning of a word b. identifying common root words and their inflectional endings c. identifying words that name actions and words that name persons, places, or things d. recognizing that compound words are made up of shorter words e. determining what words mean from how they are used in context of a sentence either heard or read f. sorting words into conceptual categories g. distinguishing shades of meaning among verbs and adjectives h. locating words in a dictionary	Develop an understanding of vocabulary by: a. using prefixes, root words, and suffixes to determine the meaning of words b. using knowledge of the meaning of individual words to determine the meaning of compound words c. using context to determine the meaning of a new word or multiple-meaning word in text d. using antonyms and synonyms e. locating words in a dictionary or glossary to determine or clarify the meaning of words or phrases f. distinguishing meaning among closely related verbs and adjectives	Develop an understanding of vocabulary by: a. decoding and identifying the meaning of common prefixes and suffixes and knowing how they change the meaning of root words b. using sentence level context to determine the relevant meaning of unfamiliar words or distinguish among multiple meaning words c. using homographs, and homophones d. distinguishing the literal and non-literal meanings of words and phrases in context e. determining the meaning of the new word formed when a known affix is added to a known base word	Develop an understanding of vocabulary by: a. determining the meaning of academic English words derived from Latin, Greek, or other linguistic root words and their prefixes and suffixes b. using the context of the sentence to determine the meaning of unfamiliar words or multiple-meaning words c. completing analogies d. identifying the meaning of common idioms and figurative language e. using a dictionary or glossary to determine the meanings, syllabication, and pronunciation or unknown words	Develop an understanding of vocabulary by: a. determining the meaning of academic English words derived from Latin, Greek, or other linguistic root words and their prefixes and suffixes through context b. using context to determine meaning of unfamiliar or multiple-meaning words c. constructing analogies d. explaining the meaning of common idioms, adages, similes, metaphors, hyperboles and other sayings in text e. identifying and using words and phrases that signal contrast, addition, and relationships

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1	Develop and apply skills to the reading process.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B (cont'd) **Vocabulary** **6-12 Correlation Reading Literary 1B, Reading Informational 1B**		i. using words and phrases acquired through conversations, reading and being read to and responding to texts	g. recognizing that some words have literal and non-literal meanings h. using conversational, general academic, and domain-specific words and phrases	f. using a dictionary or a glossary to determine the meanings, syllabications, and pronunciation of unknown words g. discussing analogies h. determining the meaning of the author's use of similes and metaphors to produce imagery i. using conversational, general academic, and domain-specific words and phrases	f. using conversational, general academic, and domain-specific words and phrases	f. using a dictionary, a glossary, or a thesaurus (printed or electronic) to determine pronunciations, parts of speech, meanings, and alternate word choices g. using conversational, general academic, and domain-specific words and phrases

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1	**Develop and apply skills to the reading process.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C **Making Connections** **6-12 Correlation Reading Literary 3B**	With assistance, determine the connection between: a. text to self (text ideas and own experiences) b. text to text (text ideas including similarities and differences in fiction and nonfiction)	Determine the connection between: a. text to text (text ideas including similarities and differences in fiction and nonfiction)	Determine the relevant connections between: a. text to text (text ideas, including similarities and differences regarding information and relationships in fiction and nonfiction) b. text to world (text ideas regarding experiences in the world)	Explain relevant connections between: a. text to text (ideas and information in various fiction and nonfiction works, using compare and contrast) b. text to world (text ideas regarding experiences in the world)	Explain relevant connections between: a. text to text (ideas and information in various fiction and nonfiction works, using compare and contrast) b. text to world (text ideas regarding experiences in the world by demonstrating an awareness that literature reflects a cultural and historical time frame)	Compare, contrast, and analyze relevant connections between: a. text to text (ideas and information in various fiction and nonfiction works, using compare and contrast) b. text to world (text ideas regarding experiences in the world by demonstrating an awareness that literature reflects a cultural and historical time frame)

As students mature and grow as readers, the text level and connections should become more complex.

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Reading

1	**Develop and apply skills to the reading process.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
D **Independent Text** **No 6- 12 Correlation**	Read independently for sustained periods of time by: a. engaging with text as developmentally appropriate	Read independently for multiple purposes over sustained periods of time by: a. engaging with and reading text that is developmentally appropriate b. producing evidence of reading	Read independently for multiple purposes over sustained periods of time by: a. reading text that is developmentally appropriate b. producing evidence of reading	Read independently for multiple purposes over sustained periods of time by: a. reading text that is developmentally appropriate b. producing evidence of reading	Read independently for multiple purposes over sustained periods of time by: a. reading text that is developmentally appropriate b. producing evidence of reading	Read independently for multiple purposes over sustained periods of time by: a. reading text that is developmentally appropriate b. producing evidence of reading

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2	**Develop and apply skills and strategies to comprehend, analyze and evaluate fiction, poetry and drama from a variety of cultures and times.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A	With assistance, read, infer and draw conclusions to:	Read, infer, analyze, and draw conclusions to:	Read, infer, analyze, and draw conclusions to:	Read, infer, analyze, and draw conclusions to:	Read, infer, analyze, and draw conclusions to:	Read, infer, analyze, and draw conclusions :
Fiction 6-12 Correlation Reading Literary 1A	a. identify elements of a story, including setting, character, and key events b. retell a main event from a story read aloud and familiar stories c. recognize sensory details and reoccurring phrases d. recognize different types of texts e. name author and illustrator of a story and describe how each is telling the story f. compare and contrast adventures of characters in familiar stories g. ask and answer questions about unknown words in text	a. describe characters, setting, problem, solution, and events in logical sequences b. describe the main idea of a story c. describe sensory details d. explain recurring phrases and why they are used e. explain the actions of the main character and the reasons for those actions f. identify who is telling the story g. compare and contrast adventures and experiences of characters in stories	a. describe the setting, problems, solutions, sequence of events (plot), and big idea or moral lesson b. describe the main characters in works of fiction, including their traits, motivations, and feelings c. compare and contrast different versions of the same story with respect to their characters, settings, and sequence of events d. describe cause and effect relationships e. explain how the story changes based on who is telling the story f. compare and contrast the differences in points of view of characters and how stories are narrated	a. summarize and sequence the events/plot and explain how past events impact future events b. describe the personality traits of characters from the thoughts, words, and actions c. describe the interaction of characters, including relationships and how they change d. paraphrase the big idea/themes and supporting details of texts e. compare and contrast key elements in various types of fiction f. explain cause and effect relationships g. distinguish their own point of view from that of the narrator or those of the characters	a. summarize and sequence the events/plot, and explain how past events impact future events, and identify the theme b. describe the personality traits of characters from the thoughts, words, and actions c. describe the interaction of characters, including relationships and how they change d. compare and contrast the adventures or exploits of characters and their roles e. compare and contrast the point of view from which stories are narrated, explain whether the narrator or speaker of a story is first or third person	a. compare and contrast the roles and functions of characters in various plots, their relationships, and their conflicts b. explain the theme or moral lesson, conflict and resolution in a story or novel c. describe how a narrator's or speaker's point of view influences events d. recognize foreshadowing e. explain the effect of a historical event or movement in literature f. introduce origin myths, and culturally significant character/ events in mythology g. introduce different forms of third-person points of view in stories

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2	**Develop and apply skills and strategies to comprehend, analyze and evaluate fiction, poetry and drama from a variety of cultures and times**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Poetry** **6-12 Correlation Reading Literary 1A, 2A, 2C**	With assistance, read, infer and draw conclusions to: a. respond to rhythm and rhyme through identifying a regular beat and similarities in word sounds	Read, infer and draw conclusions to: a. use rhythm, rhyme and alliteration through identifying a regular beat and similarities in word sounds	Read, infer and draw conclusions to: a. describe how rhythm, rhyme, and repetition create imagery in poetry b. use onomatopoeia	Read, infer and draw conclusions to: a. use examples of alliteration b. identify basic forms of poetry	Read, infer and draw conclusions to: a. explain structural elements of poetry	Read, infer and draw conclusions to: a. explain how poets use sound and visual elements in poetry b. identify forms of poems

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Reading

2	Develop and apply skills and strategies to comprehend, analyze and evaluate fiction, poetry and drama from a variety of cultures and times.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C	With assistance, read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:
Drama 6-12 Correlation Reading Literary 1A, 2A, 2C	a. identify characters in a puppet play or performance by actors	a. identify characters and dialogue in plays or performances by actors b. recognize sensory details in literary texts	a. identify characters, setting, acts, and scenes in plays b. identify the elements of dialogue and use them in informal plays	a. explain the elements of plot, setting, and character as presented through dialogue in scripts that are read or viewed b. identify language that creates a graphic visual experience and appeals to the senses	a. analyze how characters change from the beginning to the end of a play or film b. explain structural elements of dramatic literature	a. analyze the similarities between an original text and its dramatic adaptation b. identify structural elements of dramatic literature c. evaluate the critical impact of sensory details, imagery, and figurative language

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3	**Develop and apply skills and strategies to comprehend, analyze and evaluate** nonfiction **(e.g., narrative, information/explanatory, opinion, persuasive, argumentative) from a variety of cultures and times.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A	With assistance, read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:	Read, infer and draw conclusions to:
Text Features 6-12 Correlation Reading Informational 1A, 1C	a. identify the topic and details in an expository text heard and/or read referring to the words and/or illustrations b. use titles and illustrations to make predictions about text c. identify text features d. identify the meaning of environmental print	a. use text features to restate the main idea b. explain facts or details using text features and distinguish between what facts were provided by pictures and what facts were conveyed via words c. use text features to locate specific information in text d. follow written multi-step directions with picture cues to assist with understanding	a. identify the main idea of sections of text and distinguish it from the topic b. demonstrate understanding by locating facts to answer and/or ask questions c. use text features to locate specific information d. explain common graphic features to assist in the interpretation of text e. follow written multi-step directions f. describe connections between, and state the order of, the events or ideas	a. explain the author's purpose b. identify the details or facts that support the main idea c. use text and graphic features to locate information and to make and verify predictions d. follow and explain a set of written multi-step directions e. describe the relationship between events, ideas, concepts or steps	a. use multiple text features to locate information and gain an overview of the contents of text b. describe the sequence of events, ideas, concepts, or steps needed to carry out a procedure c. interpret and explain factual information presented graphically	a. use multiple text features and graphics to locate information and gain an overview of the contents of text information b. interpret details from procedural text to complete a task, solve a problem, or perform an action c. interpret factual or quantitative information

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3	**Develop and apply skills and strategies to comprehend, analyze and evaluate nonfiction (e.g. narrative, information/explanatory, opinion, persuasive, argumentative) from a variety of cultures and times.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Literary Techniques** **6-12 Correlation Reading Informational 1D, 2D, 2B, 2C**	With assistance, read, infer and draw conclusions to: a. respond to examples of sensory details	Read, infer and draw conclusions to: a. distinguish between fiction and nonfiction b. identify examples of sensory details	Read, infer and draw conclusions to: a. explain why a text is fiction or nonfiction b. ask and answer questions to clarify meaning c. explain examples of sensory details	Read, infer and draw conclusions to: a. distinguish the difference between a biography and an autobiography b. distinguish fact from opinion c. distinguish point of view from what the author is trying to persuade the reader to think or do d. explain examples of sound devices, literal and nonliteral meanings, and figurative language	Read, infer and draw conclusions to: a. explain similarities and differences between the events and characters' experiences in a fictional work and the actual events and experiences described in an author's biography or autobiography b. analyze, make inferences, and draw conclusions about persuasive text; use evidence from the text to explain the author's purpose; and support the analysis c. explain how an author uses language to present information to influence what the reader thinks or does	Read, infer and draw conclusions to: a. evaluate if the author's purpose was achieved, identify reasons for the decision, and provide evidence to support the claim b. analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent c. verify facts through established methods d. identify the author's viewpoint or position, supporting premises and evidence, and conclusion of a persuasive argument e. recognize exaggerated, contradictory, or misleading statements

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3	**Develop and apply skills and strategies to comprehend, analyze and evaluate nonfiction (e.g. narrative, information/explanatory, opinion, persuasive, argumentative) from a variety of cultures and times.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B (cont'd)						f. explain the type of evidence used to support a claim in a persuasive text g. use reasoning to determine the logic of an author's conclusion and provide evidence to support reasoning
Literary Techniques 6-12 Correlation Reading Informational 1D, 2D, 2B, 2C						

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3	**Develop and apply skills and strategies to comprehend, analyze and evaluate nonfiction (e.g. narrative, information/explanatory, opinion, persuasive, argumentative) from a variety of cultures and times.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C **Text Structures** **6-12 Correlation Reading Informational 2A**	With assistance, read, infer and draw conclusions to: a. ask and answer questions to clarify meaning b. identify basic similarities and differences between two texts on the same topic c. name the main topic and recall key details of the text d. ask and answer questions about unknown words in a text	Read, infer and draw conclusions to: a. ask and answer questions to clarify meaning b. identify main ideas and provide supporting details c. describe the connection between two individuals, events, ideas, or pieces of information in a text d. identify reasons an author gives to support points in a text e. identify similarities and differences between texts on the same topic	Read, infer and draw conclusions to: a. explain main ideas and supporting details b. describe the connection between events and retell the sequence of events c. describe the connection between and identify problems and solutions d. identify the author's purpose e. compare and contrast the most important points presented by text on the same topic	Read, infer and draw conclusions to: a. describe relationships among events, ideas, concepts, and cause and effect in texts b. explain the relationship between problems and solutions c. use information gained from illustrations and words to demonstrate understanding of the text d. explain the author's purpose e. compare and contrast the most important points and key details presented in texts on the same topic	Read, infer and draw conclusions to: a. distinguish fact from opinion in a text and explain how to verify what is a fact b. explain explicit and implicit relationships among ideas in texts c. explain author's purpose d. compare and contrast a firsthand and secondhand account of the same event or topic	Read, infer and draw conclusions to: a. identify devices used in biographies and autobiographies, including how an author presents major events in a person's life b. explain the difference between a stated and implied purpose for an expository text c. analyze how the pattern of organization of a text influences the relationships d. analyze multiple accounts of the same event or topic, noting similarities and differences in the point of view e. integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably

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4	**Comprehend and analyze words, images, graphics, and sounds in various media and digital forms to impact meaning.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Digital and Media Literacy** **6-12 Correlation Reading Literary 3A**	With assistance, develop an awareness of media literacy by: a. identifying different forms of media b. identifying techniques used in media	With assistance, develop an awareness of media literacy by: a. distinguishing purposes of media b. explaining techniques used in media	Read to develop an understanding of media and its components by: a. explaining purposes of media b. describing techniques used to create media messages c. identifying various written conventions for using digital media	Read to develop an understanding of media and its components by: a. understanding how communication changes when moving from one genre of media to another b. explaining how various design techniques used in media influence the message c. comparing various written conventions used for digital media d. identifying text structures and graphics features of a web page	Read to develop an understanding of media and its components by: a. explaining the positive and negative impacts of advertisement techniques used in various genres of media to impact consumer behavior b. explaining how various design techniques used in media influence the message c. comparing various written conventions used for digital media d. explaining text structures and graphics features of a web page and how they help readers to comprehend text	Read to develop an understanding of media and its components by: a. explaining how messages conveyed in various forms of media are presented differently b. comparing and contrasting the difference in techniques used in media c. identifying the point of view of media presentations d. analyzing various digital media venues for levels of formality and informality e. explaining textual and graphics features of a web page and how they help readers to comprehend text

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1	**Understand how English is written and read (Start of Reading Foundations).**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Print Awareness** **No 6-12 Correlation**	Develop print awareness in the reading process by: a. identifying all upper and lower case letters b. sequencing the letters of the alphabet c. demonstrating that books are read left to right, top to bottom d. demonstrating that written words are made up of different letters e. knowing that a sentence is comprised of a group of words separated by spaces f. demonstrating one-to-one correspondence between spoken words and written words	Develop print awareness in the reading process by: a. recognizing that sentences are comprised of words separated by spaces b. recognizing the distinguishing features of a sentence	Develop print awareness in the reading process by: a. understanding that sentences are organized into paragraphs to convey meaning			

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2	**Understand how English is written and read.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Phonemic Awareness No 6-12 Correlation**	Develop phonemic awareness in the reading process by: a. identifying sounds in spoken words b. producing rhymes in response to spoken words c. distinguishing orally presented rhyming pairs of words from non-rhyming pairs d. recognizing spoken alliteration or groups of words that begin with the same onset or initial sound e. blending spoken onsets and rimes to form simple words f. blending spoken phonemes to form one syllable words g. isolating the initial, medial and final sounds in spoken words h. segmenting spoken words into 2 or 3 phonemes	Develop phonemic awareness in the reading process by: a. producing and identifying sounds and syllables in spoken words b. distinguishing between long and short vowel sounds c. recognizing the change in a spoken word when a specific phoneme is added, changed, or removed d. blending spoken phonemes to form 1 or 2 syllable words including consonant blends e. segmenting spoken words of 3 – 5 phonemes into individual phonemes				

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3	**Understand how English is written and read.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A	Develop phonics in the reading process by:	Develop phonics in the reading process by:	Develop phonics in the reading process by:	Develop phonics in the reading process by:	Develop phonics in the reading process by:	Develop phonics in the reading process by:
Phonics No 6-12 Correlation	a. producing and writing letter(s) for most short vowel and consonant sounds b. reading high frequency words c. blending letter sounds to decode simple words d. recognizing that new words can be created when letters are changed, added, or deleted and using letter sound knowledge to write simple messages and words	a. decoding words in context by using letter sound knowledge b. identifying letters for the spelling of short and long vowels c. producing consonant blends d. producing consonant digraphs e. combining sounds from letters and common spelling patterns to create and decode recognizable words f. using syllabication patterns to decode words g. reading irregularly spelled words h. reading root words with inflectional endings i. reading contractions and compound words j. reading high frequency words k. demonstrating decoding skills when reading	a. decoding multisyllabic words in context by applying common letter-sound correspondences including: single letters, consonant blends , consonant and vowel digraphs and vowel diphthongs b. distinguishing long and short vowels when reading regularly spelled one syllable words c. decoding regularly spelled two syllable words with long vowels d. decoding words with vowel diphthongs e. decoding words with vowel digraphs f. reading words with common prefixes and suffixes g. using contractions	a. decoding multisyllabic words in context, and independent of context, by applying common spelling patterns b. decoding words that double final consonants when adding an ending c. using the meaning of common prefixes and suffixes d. using the meaning of homophones e. decoding known and unknown words by spelling patterns f. reading irregularly spelled high frequency words	a. decoding words using knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read unfamiliar multi-syllabic words in context b. reading root words, prefixes, and suffixes and important words from specific content curricula Continue to address earlier standards as needed and as applies to more difficult texts.	a. decoding words using knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read unfamiliar multi-syllabic words in context b. reading root words, prefixes, and suffixes and important words from all specific content curricula

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3	Understand how English is written and read.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A (cont'd) **Phonics** **No 6-12 Correlation**			h. using common syllable patterns to decode words including r-controlled vowels i. reading irregularly spelled high-frequency words j. demonstrating decoding skills when reading new words in a text			

DRAFT

4	Understand how English is written and read.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Fluency** **No 6-12 Correlation**	Read with support, appropriate texts with purpose and understanding	Read appropriate texts with fluency (rate, accuracy, expression, appropriate phrasing) with purpose and for comprehension a. use context to confirm or self-correct word recognition and understanding, rereading as necessary	Read appropriate texts with fluency (rate, accuracy, expression, appropriate phrasing) with purpose and for comprehension a. use context to confirm or self-correct word recognition and understanding, rereading as necessary	Read appropriate texts with fluency (rate, accuracy, expression, appropriate phrasing) with purpose and for comprehension a. use context to confirm or self-correct word recognition and understanding, rereading as necessary	Read appropriate texts with fluency (rate, accuracy, expression, appropriate phrasing) with purpose and for comprehension a. use context to confirm or self-correct word recognition and understanding, rereading as necessary	Read appropriate texts with fluency (rate, accuracy, expression, appropriate phrasing) with purpose and for comprehension a. use context to confirm or self-correct word recognition and understanding, rereading as necessary

DRAFT

1	Apply a writing process to develop a text for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Prewriting** **6-12 Correlation Writing 2A**	Follow a writing process, with assistance, to generate a writing plan through: a. using pictures, oral language or written letters, and/or words	Follow a writing process to plan a first draft by: a. brainstorming and recording key ideas	Follow a writing process to plan a first draft by: a. brainstorming and recording key ideas using a graphic organizer	Follow a writing process to plan a first draft by: a. using a simple pre-writing strategy when given the purpose and the intended audience	Follow a writing process to plan a first draft by: a. selecting a genre appropriate for conveying the purpose to an intended audience b. formulating questions related to the topic c. accessing prior knowledge or building background knowledge related to the topic d. using a pre-writing strategy	Follow a writing process to plan a first draft by: a. selecting a genre appropriate for conveying the purpose to an intended audience b. formulating questions related to the topic c. accessing prior knowledge or building background knowledge related to the topic d. using a prewriting strategy

DRAFT

1	Apply a writing process to develop a text for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Draft** **6-12 Correlation Writing 2A**	Appropriate to genre type, develop a draft from prewriting by: a. sequencing the actions or details through letters, words, and pictures ***Note:*** *Refer to* ***Grade K, W2A-C*** *genre specific standards.*	Appropriate to genre type, develop a draft from prewriting by: a. sequencing ideas into sentences and stay on topic throughout the text b. generating evidence of a simple opening and simple closing ***Note:*** *Refer to* ***Grade 1, W2A-C*** *genre specific standards.*	Appropriate to genre type, develop a draft from prewriting by: a. sequencing ideas into clear and coherent sentences b. generating paragraphs with one main idea c. creating evidence of a beginning, middle and end d. addressing an appropriate audience ***Note:*** *Refer* ***to Grade 2, W2A-C*** *genre specific standards.*	Appropriate to genre type, develop a draft from prewriting by: a. generating a main idea to support a multiple paragraph text using a variety of sentence types, including imperative and exclamatory b. supporting the topic sentences within each paragraph with facts and details (from sources when appropriate) c. categorizing, organizing, and sequencing the supporting details into a text with a clear beginning, middle, and end d. addressing an appropriate audience ***Note:*** *Refer to* ***Grade 3, W2A-C*** *genre specific standards.*	Appropriate to genre type, develop a draft from prewriting by: a. generating a main idea to support a multiple paragraph text, using a variety of sentence types, including compound b. establishing and supporting a main idea with an overall topic sentence at, or near, the beginning of the first paragraph c. categorizing, organizing, and sequencing facts, details, and/or events into a text (from sources when appropriate) into clear introductory, supporting, and concluding paragraphs d. addressing an appropriate audience ***Note:*** *Refer to* ***Grade 4, W2A-C*** *genre specific standards.*	Appropriate to genre type, develop a draft from prewriting by: a. choosing an appropriate organizational structure and building on one main idea to create a multiple paragraph text appropriate to the genre b. establishing and supporting a main idea with an overall topic sentence at, or near, the beginning of the first paragraph c. categorizing, organizing, and sequencing facts, details, and/or events (from sources when appropriate) into clear introductory, supporting, and concluding paragraphs applicable to the organizational structure

DRAFT

1	Apply a writing process to develop a text for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B (cont'd)						d. restating the overall main idea in the concluding statement e. addressing an appropriate audience, organization, and purpose ***Note:*** *Refer to* ***Grade 5****,* ***W2A-C*** *genre specific standards.*

Draft
6-12 Correlation Writing 2A

DRAFT

1	Apply a writing process to develop a text for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C **Revise/Edit** **6-12 Correlation Writing 3A**	Reread, revise, and edit drafts, with assistance from adults/peers, to: a. respond to questions and suggestions, adding details to strengthen writing b. edit by leaving spaces between words in a sentence	Reread, revise and edit drafts, with assistance from adults/peers, to: a. respond to questions and suggestions, clarifying meaning by adding details to sentence construction and strengthening writing b. edit by leaving spaces between words in sentences c. edit for language conventions	Reread, revise and edit drafts with assistance from adults/peers, to: a. strengthen writing as needed by revising • main idea • details • word choice • sentence construction • event order • audience • voice b. edit for language conventions	Reread, revise and edit drafts with assistance from adults/peers, to: a. develop and strengthen writing by revising • main idea • sequence (ideas) • focus • beginning/middle /end • details/facts (from sources, when appropriate) • word choice (related to the topic) • sentence structure • transitions • audience and purpose • voice b. edit for language conventions	Reread, revise and edit drafts with assistance to: a. develop and strengthen writing by revising • main idea • sequence (ideas) • focus • beginning/middle /end • details/facts (from multiple sources, when appropriate) • word choice (related to the topic) • sentence structure • transitions • audience and purpose • voice b. edit for language conventions	Reread, revise, and edit drafts with assistance to: a. develop and strengthen writing by revising • main idea • sequence (ideas) • focus • organizational structure • details/facts (from multiple sources, when appropriate) • word choice (related to the topic) • sentence structure • transitions • audience and purpose • voice b. edit for language conventions

DRAFT

1	Apply a writing process to develop a text for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
D **Produce/Publish and Share Writing** **6-12 Correlation Writing 2A**	With assistance from adults/peers: a. explore a variety of conventional/digital tools to produce and publish writing ***Note:*** *Refer to* ***Grade K, W2A-C*** *genre specific standards.*	With assistance from adults/peers: a. use a variety of conventional/digital tools to produce and publish writing ***Note:*** *Refer to* ***Grade 1, W2A-C*** *genre specific standards.*	With assistance from adults/peers: a. use a variety of conventional/digital tools to produce and publish writing b. introduce keyboarding skills ***Note:*** *Refer to* ***Grade 2, W2A-C*** *genre specific standards.*	With assistance from adults/peers: a. use a variety of conventional tools and technology (including keyboarding skills) to produce and publish writing as well as to interact and collaborate with others ***Note:*** *Refer to* ***Grade 3, W2A-C*** *genre specific standards.*	With assistance from adults/peers: a. use technology, including the Internet, to produce and publish writing b. demonstrate sufficient command of keyboarding skills to type a minimum of one page, ideally in a single sitting ***Note:*** *Refer to* ***Grade 4, W2A-C*** *genre specific standards.*	With assistance from adults/peers: a. use technology, including the Internet, to produce and publish writing b. demonstrate sufficient command of keyboarding skills to type a minimum of two pages, ideally in a single sitting ***Note:*** *Refer to* ***Grade 5, W2A-C*** *genre specific standards.*

DRAFT

2	Compose well-developed writing texts for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A	With assistance, draw/write opinion texts that:	Write opinion texts that:	Write opinion texts that:	Write opinion texts that:	Write opinion texts that:	Write opinion texts that:
Opinion/Argumentative 6-12 Correlation Writing 2A	a. use a combination of drawing and/or writing to tell an opinion about a topic or text being studied b. give logical reasons for suggesting that others follow a particular course of action or line of thinking c. use words that are related to the topic	a. introduce a topic or text being studied b. state an opinion about the topic or text and provide a reason for the opinion c. use some specific words that are related to the topic d. follow a sense of order in writing e. provide some sense of closure	a. introduce a topic or text being studied using complete sentences b. state an opinion about the topic or text and provide reasons for the opinion c. use specific words that are related to the topic and audience d. use linking/transition words and phrases to signal event order e. provide evidence of a beginning, middle and concluding statement or section	a. introduce a topic or text being studied, using connected sentences b. state an opinion or establish a position and provide reasons for the opinion/position c. use specific and accurate words that are related to the topic, audience, and purpose d. contain information using student's original language, except when using direct quotation from a source e. reference the name of the author(s) or name of the source used for details or facts included in the text f. use transitions to connect opinion and reason g. provide clear evidence of a beginning, middle and a concluding statement or paragraph	a. introduce a topic or text being studied using an introductory paragraph b. state an opinion or establish a position and provide reasons for the opinion/position, supported by facts and details c. use specific and accurate words that are related to the topic, audience and purpose d. contain information using student's original language, except when using direct quotation from a source e. reference the name of the author(s) or name of the source used for details or facts included in the text f. use transitions to connect opinion and reason	a. introduce a topic or text being studied using an introductory paragraph that clearly supports the writer's purpose b. state an opinion or establish a position and provide relevant reasons for the opinion supported by multiple facts and details c. use specific and accurate words that are related to the topic, audience, and purpose d. contain information using student's original language, except when using direct quotation from a source e. reference the name of the author(s) or name of the source used for details or facts included in the text f. use transitions to connect opinion and reason

DRAFT

2	Compose well-developed writing texts for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A (cont'd)					g. organize the supporting details/reasons into introductory, supporting, and concluding paragraphs	g. organize the supporting details/reasons into introductory, supporting, and concluding paragraphs
Opinion/Argumentative 6-12 Correlation Writing 2A						

DRAFT

2	Compose well-developed writing texts for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Informative/Explanatory 6-12 Correlation Writing 2A**	With assistance, draw or write informative/ explanatory texts that: a. use a combination of drawing and/or writing to name and inform about a topic or a text they are learning in school b. use words that are related to the topic	Write informative/ explanatory texts that: a. introduce a topic or text being studied and supply facts b. use some specific words that are related to the topic c. follow a sense of order in writing d. create some sense of closure	Write informative/ explanatory texts that: a. introduce a topic or text being studied, using complete sentences b. use facts and definitions to develop points in generating paragraphs c. use specific words that are related to the topic and audience d. use linking words and phrases to signal event order e. create a concluding statement or paragraph	Write informative/ explanatory texts that: a. introduce a topic or text being studied b. develop the topic with simple facts, definitions, details, and explanations c. use specific, and relevant, words that are related to the topic, audience and purpose d. uses the student's original language, except when quoting from a source e. use transition words to connect ideas within categories of information f. create a concluding statement or paragraph	Write informative/ explanatory texts that: a. introduce a topic using a topic sentence in an introductory paragraph b. develop the topic into supporting paragraphs from sources, using topic sentences with facts, details, examples, and quotations c. use specific, relevant and accurate words that are suited to the topic, audience, and purpose d. contain information using student's original language, except when using direct quotations from a source e. use transitions to connect categories of information f. use text structures when useful g. create a concluding paragraph related to the information	Write informative/ explanatory texts that: a. introduce a topic using a topic sentence in an introductory paragraph b. develop the topic into supporting paragraphs from sources, using topic sentences with facts, details, examples, and quotations c. use an organizational format that suits the topic d. use specific, relevant, and accurate words that are suited to the topic, audience, and purpose e. contain information using student's original language, except when using direct quotations from a source f. use transition words to connect ideas within and across categories of information g. use text structures when useful h. create a concluding paragraph related to the information

2	Compose well-developed writing texts for audience and purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C **Narrative/Literary** **6-12 Correlation Writing 2A**	With assistance, draw and/or write fiction or non-fiction narratives and poems that: a. use a combination of drawing and/or writing to narrate a story or experience the student has had or has imagined b. tell the reader about a character or personal event c. place events in the order they occurred d. use words that are related to the topic e. provide a reaction to what happened in the events	Write fiction or non-fiction narratives and poems that: a. narrate a story or experience b. use details to describe the story or experience c. place events in the order they occurred d. use linking words to indicate beginning/middle/ end e. use words that are related to the topic f. provide a reaction to what happened in the events	Write fiction or non-fiction narratives and poems that: a. establish a situation/topic based on the student's experience or imagination b. introduce a main character and setting c. develop sensory details d. follow a logical sequence of events using complete sentences to create a beginning/middle/ end e. use linking/transition words to signal event order f. use specific words that are related to the topic and audience	Write fiction or non-fiction narratives and poems that: a. establish a setting, situation/topic and introduce a narrator and/or characters b. use narrative techniques, such as dialogue and descriptions c. establish an organize an event sequence to establish a beginning/middle/ end d. use transition words and phrases to signal event order e. use specific and relevant words that are related to the topic, audience, and purpose	Write fiction or non-fiction narratives and poems that: a. establish a setting, situation/topic and introduce a narrator and/or characters b. use narrative techniques, such as dialogue, motivation and descriptions c. organize an event sequence that unfolds naturally to establish a beginning/middle/ end d. use a variety of transitions to manage the sequence of events e. use specific, relevant and accurate words that are suited to the topic, audience, and purpose	Write fiction or non-fiction narratives and poems that: a. establish a setting, situation/topic and introduce a narrator and/or characters b. use narrative techniques, such as dialogue, motivation, and descriptions c. organize an event sequence that unfolds naturally to establish a beginning/middle/ end d. use a variety of transitions to manage the sequence of events e. use specific, relevant, and accurate words that are suited to the topic, audience, and purpose

DRAFT

3	Gather, analyze, evaluate and use information from a variety of sources.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A	With assistance, apply research process to:	With assistance, apply research process to:	Apply research process to:	Apply research process to:	Apply research process to:	Apply research process to:
Research Process 6-12 Correlation Writing 1A	a. generate a list of open-ended questions about topics of class interest b. decide what sources or people in the classroom, school, library, or home can answer their questions c. gather evidence from sources d. use pictures in conjunction with writing when documenting research	a. generate a list of open-ended questions about topics of interest b. decide what sources of information might be relevant to answer these questions c. gather personal and natural evidence from available sources, as well as from interviews with local experts d. organize information found during group or individual research, using graphic organizers or other aids e. make informal presentations of information gathered f. self-evaluate using previously established teacher/student criteria	a. generate a list of open-ended questions about topics of interest b. create an individual question about a topic c. use their own question to find information on their topic d. gather evidence from available sources, literary and informational e. record basic information from literary and informational texts in simple visual format f. present and evaluate information in written and oral reports or displays, using previously established teacher/student criteria	a. generate a list of subject appropriate topics b. create an individual question about a topic c. decide what sources of information might be relevant to answer these questions d. locate information in reference texts, electronic resources, interviews, or visual sources and literary and informational texts e. determine the accuracy and relevance of the information related to a selected question f. take simple notes in own words and sort evidence into provided categories or organizer g. use quotation marks to denote direct quotations when recording specific words and sentences from a source	a. generate a list of subject appropriate topics b. create a research question to address relevant to a chosen topic c. identify a variety of relevant sources, literary and informational d. use organizational features of print and digital sources efficiently to locate information e. convert graphic/visual data into written notes f. determine the accuracy of the information gathered g. differentiate between paraphrasing and plagiarism when using ideas of others h. record bibliographic information from sources according to a standard format	a. generate a list of subject appropriate topics b. formulate and refine an open-ended research question c. follow guidelines for collecting and recording information d. select relevant resources, literary and informational e. assess relevance, accuracy, and reliability of information in print and digital sources f. convert graphic/visual data into written notes g. differentiate between paraphrasing and plagiarism when using ideas of others h. present and evaluate how completely, accurately, and efficiently the research question was explored or answered using established teacher/student criteria

DRAFT

3	Gather, analyze, evaluate and use information from a variety of sources.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A (cont'd) **Research Process 6-12 Correlation Writing 1A**				h. create a resource page from notes i. present and evaluate the information in a report or annotated display, using previously established teacher/student criteria	i. present and evaluate how completely, accurately, and efficiently the research question was explored or answered using previously established teacher/student criteria	i. record bibliographic information from sources according to a standard format

DRAFT

1	Communicate using conventions of English language.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Grammar** **6-12 Correlation Writing 3A**	In speech and written form, apply standard English grammar to: a. identify naming words (nouns) and action words (verbs) b. use plural words when speaking c. express time and space d. demonstrate the use of complete sentences in shared language activities e. use question words in sentences	In speech and written form, apply standard English grammar to: a. use nouns and action verbs that designate past, present, and future in sentences b. use adjectives/adverbs in sentences c. use the conjunctions and, but, and so in sentences d. use the articles a, an, and the in sentences e. use common prepositions f. use common pronouns g. produce complete simple and compound sentences	In speech and written form, apply standard English grammar to: a. use nouns and pronouns in writing b. use collective nouns c. use common irregular nouns d. use reflexive pronouns e. use regular verbs f. use helping verbs with regular verbs g. use adjectives and adverbs in sentences h. produce simple declarative, imperative, exclamatory, and interrogative sentences	In speech and written form, apply standard English grammar to: a. use regular and irregular verbs and simple verb tenses b. use helping verbs with irregular verbs c. use complete subject and complete predicate in a sentence d. use comparative and superlative, demonstrative adjectives and adverbs e. use subject/verb agreement in sentences f. produce simple and compound imperative, exclamatory, declarative, and interrogative sentences g. use 1st, 2nd, and 3rd person pronouns and their antecedents	In speech and written form, apply standard English grammar to: a. use the "be" helping verbs with "ing" verbs b. use and order adjectives within sentences to conventional patterns c. use progressive verbs to show past, present, and future d. use adverbs in writing e. use subject/verb agreement with 1st, 2nd, and 3rd person pronouns f. use prepositions correctly in a sentence g. recognize the difference between and use coordinating conjunctions and subordinating conjunctions h. produce and expand the complete simple and compound four types of sentences i. correct sentence fragments and run-on sentences in writing	In speech and written form, apply standard English grammar to: a. explain and use the 8 parts of speech: noun, pronoun, verb, adjective, adverb, preposition, conjunction, interjection b. use relative pronouns and relative adverbs c. use pronouns consistently across a text d. use and correct verb tenses e. produce a variety of complex sentences in writing

DRAFT

1	**Communicate using conventions of English language.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Punctuation, Capitalization, Spelling 6-12 Correlation Writing 3A**	In written text: a. print in upper and lower case letters b. recognize that a sentence ends with punctuation marks c. capitalize own first and last name d. capitalize first word in a sentence e. capitalize the pronoun I f. write and name the printed letters that match the sound g. use inventive spelling with beginning, final, and medial sounds h. write and name letters for consonant and vowel sounds i. use correct spelling of own first and last names	In written text: a. print legibly, using correct spacing between words and sentences b. use ending punctuation c. capitalize the first letter of others' first and last names d. use commas to separate single words in a series e. spell words using regular spelling patterns f. spell words phonetically using phonemic awareness and spelling knowledge g. arrange words in alphabetical order, to the first letter	In written text: a. write legibly (print, cursive) b. use dialogue that contains quotation marks c. use apostrophes correctly for contractions d. capitalize weeks, days, months, holidays e. capitalize abbreviated titles of people f. spell words using irregular spelling patterns g. spell and use the plural of nouns by adding –*es* to nouns ending in *-s, -ss, -sh, -ch, or -x* h. use nouns that change their spelling in plural form i. arrange words in alphabetical order, to the second letter	In written text: a. write legibly (print, cursive) b. use an apostrophe to form possessives c. demonstrate and use commas and quotation marks in dialogue d. capitalize dialogue correctly e. use commas for greeting and closing of a friendly letter f. capitalize names of places g. capitalize titles of books, stories, and songs h. use spelling patterns and generalizations to spell compound words i. spell words that double the consonant j. spell plural words that change *'y'* to *'ies'* k. consult reference materials to check and correct spellings l. arrange words in alphabetical order, to the third letter	In written text: a. write legibly b. punctuate a dialogue between two or more characters c. insert a comma before a coordinating conjunction in a compound sentence d. capitalize proper adjectives e. use correct capitalization f. spell words with suffixes by dropping or leaving the final *'e'* g. spell words ending in the long 'e' sound h. alphabetize reference sources i. use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (roots, affixes) to read and spell accurately unfamiliar multi-syllabic words in context	In written text: a. write legibly b. use a comma before a coordinating conjunction when writing compound sentences c. use a comma to separate an introductory clause in a complex sentence d. use a comma to set off the words *yes* and *no* e. use italics when keyboarding titles of books, magazines, and newspapers f. use underlining when writing titles of books, magazines, and newspapers g. use quotation marks when writing titles of stories, songs, poems, articles h. use apostrophes in singular nouns to show possession i. write apostrophes in regular plural nouns to show possession

2	Communicate using conventions of English language.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B (cont'd)						j. use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (roots, affixes) to read and spell unfamiliar multi-syllabic words in context
Punctuation, Capitalization, Spelling 6-12 Correlation Writing 3A						

DRAFT

1	Listen for a purpose.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Purpose** **6-12 Correlation Speaking/Listening 1A, 1C**	Develop and apply effective listening skills and strategies in formal and informal settings by: a. following classroom listening rules b. continuing a conversation through multiple exchanges c. following one-step instructions, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. following classroom listening rules b. building on others' talk in conversations by responding to the comments of others c. following two-step instructions, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. following classroom listening rules b. following three-step instructions, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. following classroom listening rules b. asking questions to check understanding of information presented, staying on topic, and linking comments to the remarks of others c. following three-step instructions, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. following, generating, and justifying classroom listening rules b. posing and responding to specific questions to clarify or follow up on information, making comments that contribute to the discussion, and linking to the remarks of others c. following and restating multi-step instructions that involve a short related sequence of actions, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. following agreed upon rules for listening and fulfilling discussion rules independently b. posing and responding to specific questions to clarify or following up on information, and making comments that contribute to the discussion to link to the remarks of others c. following, restating, and giving multi-step instructions from or to others in collaborative groups, according to classroom expectations d. listening for speaker's message and summarizing main points based on evidence

DRAFT

2	**Listen for entertainment.**					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Entertainment No 6-12 Correlation**	Develop and apply effective listening skills and strategies in formal and informal settings by: a. demonstrating active listening, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. demonstrating active listening, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. demonstrating active listening, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. demonstrating active listening through body language and eye contact with the speaker, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal settings by: a. generating and following active listening rules, according to classroom expectations	Develop and apply effective listening skills and strategies in formal and informal setting by: a. evaluating and modifying own active listening skills

DRAFT

3	Speak effectively in collaborative discussions.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Collaborative Discussions** **6-12 Correlation Speaking/Listening 1A, 1C**	Speak clearly using conventions of language when presenting individually or with a group by: a. taking turns speaking, according to classroom expectations b. continuing a conversation through multiple exchanges c. confirming comprehension by retelling information and asking appropriate questions based on read-alouds or other media	Speak clearly and to the point, using conventions of language when presenting individually or with a group by: a. taking turns speaking, according to classroom expectations b. building on others' talk in conversations by responding to comments of others c. confirming comprehension of read-alouds and other media by retelling and asking appropriate questions	Speak clearly and to the point, using conventions of language when presenting individually or with a group by: a. taking turns in discussion with a shoulder partner, according to classroom expectations b. confirming comprehension of read-alouds and independent reading by retelling and asking appropriate questions	Speak clearly and to the point, using conventions of language when presenting individually or with a group by: a. coming to discussions prepared, having read or studied required material; explicitly drawing on that preparation and other information known about the topic to explore ideas under discussion b. responding appropriately to discussion in a variety of settings, according to classroom expectations c. expressing opinions of read-alouds and independent reading topics	Speak clearly and to the point, using conventions of language when presenting individually or with a group by: a. contributing to discussion after listening to others' ideas, according to classroom expectations b. expressing opinions of read-alouds and independent reading and relating opinion to others	Speak clearly and to the point, using conventions of language when presenting individually or with a group by: a. summarizing points made by others before presenting own ideas, according to classroom expectations b. providing and evaluating evidence to support opinion

DRAFT

4	Speak effectively when presenting.					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Presenting** **6-12 Correlation Speaking/Listening 2A, 2B, 2C**	Speak clearly, audibly, using conventions of language when presenting individually or with a group by: a. describing personal experiences using a prop, picture, or other visual aide b. speaking in complete sentences	Speak clearly, audibly, and to the point, using conventions of language when presenting individually or with a group by: a. explaining a topic (student-chosen), using a prop, picture, or other visual aid, with assistance to show understanding b. reciting poetry with a group or individually c. using complete sentences and adjusting volume, as needed	Speak clearly, audibly and to the point, using conventions of language when presenting individually or with a group by: a. explaining a topic (student-chosen or teacher-assigned), while maintaining eye contact with audience b. recalling and telling a story with details, including a beginning, middle, and end c. using academic language and conventions	Speak clearly, audibly and to the point, using conventions of language when presenting individually or with a group by: a. using presentation skills and/or appropriate technology b. presenting information with clear ideas and details speaking clearly at an understandable pace c. giving an informal presentation, using a variety of media e. choosing words and phrases for effect (adjectives, action verbs, figurative language) f. using academic language and conventions	Speak clearly, audibly and to the point, using conventions of language when presenting individually or with a group by: a. paraphrasing portions of a text read aloud or information presented in diverse media and formats b. using efficient presentation skills with available resources c. incorporating descriptive and sequential details in a student designed or teacher assigned topic d. giving a formal presentation to classmates, using a variety of media e. speaking with expression and fluency f. adjusting formal/informal language according to context and topic	Speak clearly, audibly and to the point, using conventions of language when presenting individually or with a group by: a. using efficient presentation skills with available resources using a variety of media b. planning an appropriate presentation, based on audience c. employing appropriate pacing, vocabulary, and gestures to communicate a clear viewpoint

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6-12 English Language Arts
Missouri Learning Standards: Grade-Level Expectations

Missouri Department of Elementary and Secondary Education
Spring 2016

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1 Comprehend and Interpret Texts (Approaching Texts as a Reader)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Evidence/Inference K-5 correlation R1A, R2A, B, C,**	Draw conclusions, infer and analyze by citing textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing relevant and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing relevant and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including where the text leaves matters uncertain.
B **Word Meanings K-5 correlation R1B**	Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings using context, affixes, or reference materials.
C **Text Features K-5 correlation R1A**	Interpret visual elements of a text and draw conclusions from them (when applicable).	Interpret visual elements of a text and draw conclusions from them (when applicable).	Interpret visual elements of a text and draw conclusions from them (when applicable).	Interpret visual elements of a text and draw conclusions from them (when applicable).	Interpret visual elements of a text and draw conclusions from them (when applicable).

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1 Comprehend and Interpret Texts (Approaching Texts as a Reader)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
D **Summarize/Theme K-5 correlation R2A**	Using appropriate text, determine the theme(s) of a text and cite evidence of its development; summarize the text.	Using appropriate text, determine the theme(s) of a text and explain the relationship between the theme(s) and supporting evidence; summarize the text distinct from personal opinions.	Using appropriate text, determine the theme(s) of a text and analyze its development over the course of a text; provide an objective summary of the text.	Using appropriate text, determine two or more themes in a text, analyze their development throughout the text, and relate the themes to life experiences; provide an objective and concise summary of the text.	Using appropriate text, determine two or more themes in a text, analyze their development throughout the text, and relate the themes to human nature and the world; provide an objective and concise summary of the text.

2 Analyze Craft and Structure (Approaching Texts as a Writer)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Structure K-5 correlation R2B, R2C**	Analyze how a particular sentence, chapter, scene, stanza, or image contributes to meaning.	Analyze how a text's form or overall structure contributes to meaning.	Analyze how an author's choice concerning a text's form or overall structure contributes to meaning.	Analyze how an author's choices concerning how to structure a text, order events, or manipulate time impact the reader.	Evaluate how an author's choices to structure specific parts of a text contribute to a text's overall meaning and its aesthetic impact.

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2 Analyze Craft and Structure (Approaching Texts as a Writer)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
B **Point of View No K-5 correlation**	Explain how an author develops the point of view of the narrator or speaker in a text.	Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.	Analyze how differences in the points of view of the characters and the audience or reader create dramatic irony.	Analyze how points of view is reflected in the characters, setting, and plot.	Analyze a case in which recognizing point of view requires distinguishing what is directly stated in a text from what is implied.
C **Craft and Meaning K-5 correlation R2B, R2C**	Analyze how word choice, including the use of figurative language and/or the repetition of words or word sounds contributes to meaning.	Analyze how specific word choices contribute to meaning and tone.	Analyze how specific word choices and sentence structures contribute to meaning and tone.	Analyze the cumulative impact of specific word choices and syntax on meaning and tone.	Evaluate how the author's word choices and use of syntax contribute to a text's overall meaning, tone and aesthetic impact.
D **Interaction and Meaning K-5 correlation R2A**	Describe how a particular text's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.	Analyze how the setting, characters, and plot of a text affect each other and contribute to meaning.	Analyze how literary devices are used to develop setting, reveal character, advance the plot and contribute to meaning.	Analyze how complex characters develop over the course of a text to advance the plot and develop the theme.	Evaluate the impact of the author's choices regarding how to develop and relate elements of a text.

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3 Synthesize Ideas from Multiple Texts (Approaching Texts as a Researcher)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Text in Forms K-5 correlation R4A**	Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the same text, noting how a performance impacts personal interpretation.	Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing how the techniques unique to each medium contribute to meaning.	Analyze the extent to which a filmed or live production of a story or drama stays faithful to or departs from the text or script, evaluating the choices made by the director or actors.	Analyze multiple performances of a story, drama, or poem evaluating how each version interprets the source text.	Analyze the representation of a subject in two different artistic mediums, including what is emphasized or absent in each treatment.
B **Relationships in Texts K-5 correlation R1C**	Compare and contrast texts in different genres that address similar themes or topics.	Compare and contrast a fictional portrayal of a time, place, or character with realistic accounts of the same subject matter.	Explain how contemporary texts make use of archetypal characters or universal themes from older or traditional texts.	Explain how and why an author alludes to or transforms source material within his or her text.	Synthesize ideas from two or more texts about similar themes or topics to articulate the complexity of the theme.
C **Historical Context K-5 correlation R2A**	Explain how plot and conflict reflect historical and/or cultural contexts.	Explain how characters and settings reflect historical and/or cultural contexts.	Explain how themes reflect historical and/or cultural contexts.	Analyze how multiple texts reflect historical and/or cultural contexts.	Evaluate how an author's work reflects his or her historical/cultural perspective.

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D **Comprehension K-5 Correlation R1A, R1D**	Read and comprehend literature, including stories, dramas and poems, independently and proficiently.	Read and comprehend literature, including stories, dramas and poems, independently and proficiently.	Read and comprehend literature, including stories, dramas and poems, independently and proficiently.	Read and comprehend literature, including stories, dramas and poems, independently and proficiently.	Read and comprehend literature, including stories, dramas and poems, independently and proficiently.

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Reading Informational Text

1 Comprehend and Interpret Texts (Approaching Texts as a Reader)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Evidence/Inference K-5 correlation R1A, R3A, B, C**	Draw conclusions, infer and analyze by citing textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing relevant and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Draw conclusions, infer and analyze by citing relevant and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including where the text leaves matters uncertain.
B **Word Meanings K-5 correlation R1B**	Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials.	Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials.
C **Text Features K-5 correlation R3A**	Interpret visual elements of a text including those from different media and draw conclusions from them (when applicable).	Interpret visual elements of a text including those from different media and draw conclusions from them (when applicable).	Interpret visual elements of a text including those from different media and draw conclusions from them (when applicable).	Interpret visual elements of a text including those from different media and draw conclusions from them (when applicable).	Interpret visual elements of a text including those from different media and draw conclusions from them (when applicable).

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Reading Informational Text

1 Comprehend and Interpret Texts (Approaching Texts as a Reader)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
D **Summarize/Claim** **K-5 correlation** **R3B, R3C**	Explain the central/main idea(s) of a text and cite evidence of its development; summarize the text.	Explain the central/main idea(s) of a text and explain the relationship between the central idea(s) and supporting evidence; summarize the text distinct from personal opinions.	Explain the central/main idea(s) of a text and analyze its development over the course of a text; provide an objective summary of the text.	Explain two or more central/main ideas in a text, analyze their development throughout the text, and explain the significance of the central ideas; provide an objective and concise summary of the text.	Explain two or more central/main ideas in a text, analyze their development throughout the text, and relate the central ideas to human nature and the world; provide an objective and concise summary of the text.

2 Analyze Craft and Structure (Approaching Texts as a Writer)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Structure** **K-5 correlation** **R3C**	Analyze how a particular sentence, paragraph, section, or image contributes to meaning.	Analyze how a text's organization or overall structure contributes to meaning.	Analyze how an author's choice concerning a text's organization or overall structure contributes to meaning.	Analyze how an author's choices concerning how to structure a text or sequence information impacts the reader.	Evaluate how an author's choices to structure specific parts of a text contribute to a text's overall meaning and its aesthetic impact.

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2 Analyze Craft and Structure (Approaching Texts as a Writer)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
B **Point of View K-5 correlation R3B**	Explain how an author's point of view or purpose is conveyed in a text.	Analyze how an author develops his/her point of view or purpose and distinguishes it from those of others.	Analyze how the author acknowledges and responds to conflicting evidence or points of view in a text.	Analyze how an author uses rhetoric to advance point of view or purpose.	Analyze a text in which the author's point of view is not obvious and requires distinguishing what is directly stated from what is implied.
C **Craft and Meaning K-5 correlation R3B**	Analyze how word choice, including the use of figurative language, connotations and/or repetition, contributes to meaning.	Analyze how word choice contributes to meaning and tone.	Analyze how word choice and sentence structure contribute to meaning and tone.	Analyze the cumulative impact of specific word choices and syntax on meaning and tone.	Evaluate how the author's word choice and use of syntax contribute to a text's overall meaning and tone.

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2 Analyze Craft and Structure (Approaching Texts as a Writer)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
D **Argument/Evidence K-5 correlation R3B**	Identify an author's argument in a text and distinguish claims that are supported by reasons and evidence from claims that are not.	Evaluate an author's argument, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.	Evaluate an author's argument, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.	Evaluate an author's argument, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.	Evaluate an author's argument and reasoning for effectiveness, validity, logic, credibility and relevance of the evidence.

3 Synthesize Ideas from Multiple Texts (Approaching Texts as a Researcher)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Texts/Forms K-5 correlation R4A**	Compare and contrast the experience of reading a text to listening to or viewing an audio or video version of the same text, noting how a performance impacts personal interpretation.	Compare and contrast information presented in different mediums and analyze how the techniques unique to each medium contribute to meaning.	Compare and contrast information presented in different mediums and analyze how the techniques unique to each medium contribute to meaning.	Analyze how similar ideas or topics are portrayed in different media formats.	Analyze the representation of a subject in two different artistic mediums, including what is emphasized or absent in each treatment.

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Reading Informational Text

3 Synthesize Ideas from Multiple Texts (Approaching Texts as a Researcher)					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
B **Relationships/ Texts K-5 correlation R1C**	Compare and contrast one author's presentation of events with that of another.	Compare and contrast how two or more authors writing about the same topic make decisions about craft and structure.	Analyze two or more texts that provide conflicting information on the same topic and identify where the texts disagree on matter of fact or interpretation.	Evaluate how effectively two or more texts develop similar ideas/topics.	Synthesize information from two or more texts about similar ideas/topics to articulate the complexity of the issue.
C **Historical Context No K-5 correlation**	Explain how the text reflects historical and/or cultural contexts.	Explain how the text reflects historical and/or cultural contexts.	Explain how the central ideas of text reflect historical and/or cultural contexts.	Analyze how multiple texts reflect the historical and/or cultural contexts.	Evaluate how an author's work reflects his or her historical/cultural perspective.
D **Comprehension K-5 Correlation R1A, R1D**	Read and comprehend informational text independently and proficiently.	Read and comprehend informational text independently and proficiently.	Read and comprehend informational text independently and proficiently.	Read and comprehend informational text independently and proficiently.	Read and comprehend informational text independently and proficiently.

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1 Approaching the Task as a Researcher					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Research** **K-5 correlation W3A**	Conduct research to answer a question, drawing on several sources; integrate information using a standard citation system. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.	Conduct research to answer a question; gather relevant sources, print and digital; integrate information using a standard citation system. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	Conduct research to answer a question (including a self-generated question); gather relevant, credible sources, print and digital; integrate information using a standard citation system. Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	Conduct research to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; gather multiple relevant, credible sources, print and digital; integrate information using a standard citation system. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.	Conduct research to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; gather multiple relevant, credible sources, print and digital; integrate information using a standard citation system. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

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2 Approaching the Task as a Writer					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A	Follow a writing process to produce clear and coherent writing in which the development, organization, style, and voice are appropriate to the task, purpose and audience; develop writing with narrative, expository, and argumentative techniques. A. Narrative: Develop narratives including poems about real or imagined experiences, with clearly identified characters, well-structured event sequences, narrative techniques and relevant, descriptive details. B. Expository: Develop informative/explanatory writing to examine a topic with relevant facts, examples, and details.	Follow a writing process to produce clear and coherent writing in which the development, organization, style, and voice are appropriate to the task, purpose and audience; develop writing with narrative, expository, and argumentative techniques. A. Narrative: Develop narratives including poems about real or imagined experiences, which establish and maintain a consistent point of view, and include clearly identified characters, well-structured event sequences, narrative techniques and relevant, descriptive details. B. Expository: Develop informative/explanatory writing to examine a topic with relevant facts, examples, and details; establish relationships between ideas and supporting evidence.	Follow a writing process to produce clear and coherent writing in which the development, organization, style, and voice are appropriate to the task, purpose and audience; develop writing with narrative, expository, and argumentative techniques. A. Narrative: Develop narratives including poems about real or imagined experiences, which establish and maintain a consistent point of view, and include clearly identified characters, well-structured event sequences, narrative techniques and relevant, descriptive details. B. Expository: Develop informative/explanatory writing to examine a topic with relevant facts, examples, and details; establish relationships between ideas and supporting evidence.	Follow a writing process to produce clear and coherent writing in which the development, organization, style, and voice are appropriate to the task, purpose and audience; self-select and blend (when appropriate) previously learned narrative, expository, and argumentative writing techniques.	Follow a writing process to produce clear and coherent writing in which the development, organization, style, and voice are appropriate to the task, purpose and audience; self-select and blend (when appropriate) previously learned narrative, expository, and argumentative writing techniques.
Development **K-5 correlation W1A, W1B, W1D, W2A, W2B, W2C**					

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2 Approaching the Task as a Writer					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A (cont'd) **Development K-5 correlation W1A, W1B, W1D, W2A, W2B, W2C**	C. Argumentative: Develop argumentative writing by introducing and supporting a claim with clear reasons and relevant evidence.	C. Argumentative: Develop argumentative writing by introducing and supporting a claim with clear reasons and relevant evidence; acknowledging counterclaims; establishing relationships between claims and supporting evidence.	C. Argumentative: Develop argumentative writing by introducing and supporting a claim with clear reasons and relevant evidence; acknowledging counterclaims; establishing relationships among claims, counterclaims, and supporting evidence.		

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3 Approaching the Task as a Reader					
A	**Grade 6**	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
Revise and Edit K-5 correlation W1C	Review, revise, and edit writing with consideration for the task, purpose, and audience. A. Organization and Content: Introduce the topic, maintain a clear focus throughout the text,and provide a conclusion that follows from the text. B. Word choice, syntax, and style: Choose precise language and establish and maintain an appropriate and consistent style; sentences are complete.	Review, revise, and edit writing with consideration for the task, purpose, and audience. A. Organization and Content: Introduce the topic, maintain a clear focus throughout the text,and provide a conclusion that follows from the text. Add or delete content to clarify meaning.	Review, revise, and edit writing with consideration for the task, purpose, and audience. A. Organization and Content: Introduce the topic, maintain a clear focus throughout the text,and provide a conclusion that follows from the text. Add or delete content and change organization to achieve the writer's purpose. B. Word choice, syntax, and style: Choose precise language and make syntactical choices appropriate for the style, task and audience.	Review, revise, and edit writing with consideration for the task, purpose, and audience. A. Organization and Content: Introduce the topic, maintain a clear focus throughout the text,and provide a conclusion that follows from the text. Achieve the writer's purpose and demonstrate an awareness of audience by making choices regarding organization and content. B. Word choice, syntax, and style: Choose precise language and make syntactical choices to reflect an understanding of how language contributes to meaning.	Review, revise, and edit writing with consideration for the task, purpose, and audience. A. Organization and Content: Introduce the topic, maintain a clear focus throughout the text,and provide a conclusion that follows from the text. Achieve the writer's purpose and enhance the reader's understanding of and experience with the text by making choices regarding organization and content.

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3 Approaching the Task as a Reader					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A (cont'd) **Revise and Edit** **K-5 correllation W1C**	C. Conventions of standard English and usage: Demonstrate a command of the conventions of standard English grammar and usage, including spelling and punctuation. D. Use transitions to clarify relationships and connect ideas, claims and signal time shifts. E. Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others.	B. Word choice, syntax, and style: Choose appropriate precise language for the style, task and audience; convey the relationship among ideas through varied sentence structures. C. Conventions of standard English and usage: Demonstrate a command of the conventions of standard English grammar and usage, including spelling and punctuation. D. Use effective transitions to clarify relationships and connect ideas, claims and signal time shifts. E. Use technology, including the Internet, to produce, publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.	C. Conventions of standard English and usage: Demonstrate a command of the conventions of standard English grammar and usage, including spelling and punctuation. D. Use a variety of appropriate transitions to clarify relationships and connect ideas, claims and signal time shifts. E. Use technology, including the Internet, to produce, publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.	C. Conventions of standard English and usage: Demonstrate a command of the conventions of standard English grammar and usage including spelling and punctuation. D. Use a variety of appropriate transitions to clarify relationships and connect ideas, claims and signal time shifts. E. Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.	B. Word choice, syntax, and style: Choose precise language and make syntactical choices to reflect an understanding of how language functions in different contexts and enhance the reader's understanding of the text. C. Conventions of standard English and usage: Demonstrate a command of the conventions of standard English grammar and usage including spelling and punctuation. D. Use a variety of appropriate transitions to clarify relationships and connect ideas, claims and signal time shifts. E. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

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1 Collaborating					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Conversations K-5 correlation SL1A, SL3A**	Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.	Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.	Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.	Work with peers to set rules for collegial discussions and decision-making, clear goals, and deadlines, and individual roles as needed.	Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
B **Questioning K-5 correlation SL3A**	Delineate a speaker's argument and claims in order to pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.	Delineate a speaker's argument and claims, evaluating reasoning in order to pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.	Delineate a speaker's argument and claims, evaluating reasoning and sufficiency of evidence in order to pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.	Delineate a speaker's argument and claims, evaluating the speaker's point of view, reasoning, and evidence in order to propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.	Delineate a speaker's argument and claims evaluating the speaker's point of view, reasoning, stance, and evidence in order to propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

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C **Viewpoints of others K-5 correlation SL1A**	Review the key ideas expressed by a speaker including those presented in diverse media and demonstrate understanding of multiple perspectives through reflection and paraphrasing.	Acknowledge new information expressed by others including those presented in diverse media and, when warranted, modify their own views.	Acknowledge new information expressed by others including those presented in diverse media and, when warranted, qualify or justify their own views in light of evidence presented.	Respond thoughtfully to diverse perspectives including those presented in diverse media; summarize points of agreement and disagreement; resolve contradictions when possible; and determine what additional information or research is needed.	Respond thoughtfully to diverse perspectives including those presented in diverse media: synthesize claims made on all sides of an issue, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.
2 Presenting					
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9-10**	**Grade 11-12**
A **Verbal Delivery K-5 correlation SL4A**	Speak clearly, audibly, and to the point, using conventions of language as appropriate to task, purpose and audience when presenting including appropriate volume.	Speak clearly, audibly, and to the point, using conventions of language as appropriate to task, purpose and audience when presenting including appropriate volume at an understandable pace.	Speak audibly, and to the point, using conventions of language as appropriate to task, purpose and audience when presenting including appropriate volume, clear articulation and accurate pronunciation at an understandable pace.	Speak audibly, and to the point, using conventions of language as appropriate to task, purpose and audience when presenting including appropriate volume, clear articulation and accurate pronunciation at an understandable pace, avoiding verbal filler that might be distracting to listeners.	Speak audibly, and to the point, using conventions of language as appropriate to task, purpose and audience when presenting including fluent and clear articulation, strategically varying volume, pitch, and pace to consistently engage listeners.

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B **Nonverbal K-5 correlation SL4A**	Position body to face the audience when speaking and make eye contact with listeners at various intervals using gestures to communicate a clear viewpoint.	Position body to face the audience when speaking and makes eye contact with listeners at various intervals using effective gestures to communicate a clear viewpoint.	Make consistent eye contact with a range of listeners when speaking using effective gestures to communicate a clear viewpoint and engage listeners.	Make consistent eye contact with a range of listeners when speaking using effective gestures to communicate a clear viewpoint and engage listeners and avoid body language or mannerisms that might be distracting to the audience.	Make consistent eye contact with a range of listeners when speaking, using a range of gestures or movement to emphasize aspects of speech while avoiding body language or mannerisms that might be distracting to the audience.
C **Multimedia K-5 correlation SL4A**	Plan and deliver appropriate presentations based on the task, audience and purpose including multimedia components in presentations to clarify claims findings and ideas.	Plan and deliver appropriate presentations based on the task, audience and purpose including multimedia components in presentations to clarify claims and findings and emphasize significant points.	Plan and deliver appropriate presentations based on the task, audience and purpose integrating multimedia into presentations to clarify information, strengthen claims and evidence, and add interest.	Plan and deliver appropriate presentations concisely and logically based on the task, audience and purpose making strategic use of multimedia in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.	Plan and deliver appropriate presentations based on the task, audience and purpose making strategic use of multimedia in presentations to enhance understanding of findings, reasoning, and evidence and to add interest conveying a clear and distinct perspective.

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K-5 Mathematics
Missouri Learning Standards: Grade-Level Expectations

Missouri Department of Elementary and Secondary Education

Spring 2016

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Number Sense

NS	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A	**Know the number names and the count sequence.**	**Understand and use numbers up to 120.**				
1	Count to 100 by ones and tens.	Count to 120, starting at any number less than 120.				
2	Count forward beginning from a given number between 1 and 20.	Read and write numerals and represent a number of objects with a written numeral.				
3	Count backward from a given number between 10 and 1.	Count backward from a given number between 20 and 1.				
4	Read and write numerals and represent a number of objects from 0 to 20.	Count by 5s to 100 starting at any multiple of five.				

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NS	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
B	**Understand the relationship between numbers and quantities; connect counting to cardinality.**					
1	Say the number names when counting objects, in the standard order, pairing each object with one and only one number name and each number name with one and only one object.					
2	Demonstrate that the last number name said tells the number of objects counted and the number of objects is the same regardless of their arrangement or the order in which they were counted.					
3	Demonstrate that each successive number name refers to a quantity that is one larger than the previous number.					

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4	Recognize, without counting, the quantity of groups up to 5 objects arranged in common patterns.					
5	Demonstrate that a number can be used to represent "how many" are in a set.					

NS	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
C	**Compare numbers.**					
1	Compare two or more sets of objects and identify which set is equal to, more than or less than the other.					
2	Compare two numerals, between 1 and 10, and determine which is more than or less than the other.					

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Number Sense and Operations in Base Ten

NBT	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A	**Work with numbers 11 – 19 to gain foundations for place value.**	**Understand place value of two-digit numbers.**	**Understand place value of three digit numbers.**	**Use place value understanding and properties of operations to perform multi-digit arithmetic.**	**Use place value understanding and properties of operations to perform multi-digit arithmetic with numbers up to one million.**	**Use place value system understanding to perform operations with multi-digit whole numbers to billions and decimals to thousandths.**
1	Compose and decompose numbers from 11 to 19 into sets of tens with additional ones.	Understand two-digit numbers are composed of ten(s) and one(s).	Understand three-digit numbers are composed of hundreds, tens and ones.	Round whole numbers to the nearest 10 or 100.	Round multi-digit whole numbers to any place.	Read, write and identify numbers from billions to thousandths using number names, base ten numerals and expanded form.
2		Understand that 10 can be thought of as a bundle of 10 ones – called a "ten".	Understand that 100 can be thought of as 10 tens – called a "hundred".	Read, write and identify whole numbers within 100,000 using base ten numerals, number names and expanded form.	Read, write and identify multi-digit whole numbers up to one million using number names, base ten numerals and expanded form.	Compare two numbers from billions to thousandths using the symbols >, = or <, and justify the solution.
3		Compare two two-digit numbers using the symbols >, = or <.	Count within 1000 by 1s, 10s and 100s starting with any number.	Demonstrate fluency with addition and subtraction within 1000.	Compare two multi-digit numbers using the symbols >, = or <, and justify the solution.	Understand that in a multi-digit number, a digit represents 1/10 times what it would represents in the place to its left.
4		Count by 10s to 120 starting at any number.	Read and write numbers to 1000 using number names, base-ten numerals and expanded form.	Multiply whole numbers by multiples of 10 in the range 10-90.	Understand that in a multi-digit whole number, a digit represents 10 times what it would represents in the place to	Evaluate the value of powers of 10 and understand the relationship to the place value system.

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Number Sense and Operations in Base Ten

					its right.	
5			Compare two three-digit numbers using the symbols >, = or <.		Demonstrate fluency with addition and subtraction of whole numbers.	Round numbers from billions to thousandths place.
6					Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, and justify the solution.	Add and subtract multi-digit whole numbers and decimals to the thousandths place, and justify the solution.
7					Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, and justify the solution.	Multiply multi-digit whole numbers and decimals to the hundredths place, and justify the solution.
8						Divide multi-digit whole numbers and decimals to the hundredths place using up to two-digit divisors and four-digit dividends, and justify the solution.

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Number Sense and Operations in Base Ten

NBT	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
B		**Use place value understanding to add and subtract.**	**Use place value understanding and properties of operations to add and subtract.**			
1		Add within 100.	Demonstrate fluency with addition and subtraction within 100.			
2		Calculate 10 more or 10 less than a given number mentally without having to count.	Add up to four two-digit numbers.			
3		Add or subtract a multiple of 10 from another two-digit number, and justify the solution.	Add or subtract within 1000, and justify the solution.			
4			Use the relationship between addition and subtraction to solve problems.			

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Number Sense and Operations in Base Ten

5			Add or subtract mentally 10 or 100 to or from a given number within 1000.			
NBT	**Kindergarten**	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C			**Represent and solve problems involving addition and subtraction.**			
1			Write and solve problems involving addition and subtraction within 100.			

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Number Sense and Operations in Fractions

NF	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A				**Develop understanding of fractions as numbers.**	**Extend understanding of fraction equivalence and ordering. (Limit denominators to 2, 3, 4, 5, 6, 8, 10, 12 and 100.)**	**Understand the relationship between fractions and decimals (denominators that are factors of 100).**
1				Understand a unit fraction as the quantity formed by one part when a whole is partitioned into equal parts.	Explain and/or illustrate why two fractions are equivalent.	Understand that parts of a whole can be expressed as fractions and/or decimals.
2				Understand that when a whole is partitioned equally, a fraction can be used to represent a portion of the whole. a. Describe the numerator as representing the number of pieces being considered. b. Describe the denominator as the number of pieces that make the whole.	Recognize and generate equivalent fractions.	Convert decimals to fractions and fractions to decimals.

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Number Sense and Operations in Fractions

3				Represent fractions on a number line. a. Understand the whole is the interval from 0 to 1. b. Understand the whole is partitioned into equal parts. c. Understand a fraction represents the endpoint of the length a given number of partitions from 0.	Compare two fractions using the symbols >, = or <, and justify the solution.	Compare and order fractions and/or decimals to the thousandths place using the symbols >, = or <, and justify the solution.
4				Demonstrate that two fractions are equivalent if they are the same size, or the same point on a number line.		
5				Recognize and generate equivalent fractions using visual models, and justify why the fractions are equivalent.		
6				Compare two fractions with the same numerator or denominator using the symbols >, = or <, and justify the solution.		

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7				Explain why fraction comparisons are only valid when the two fractions refer to the same whole.		

NF	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
B					**Extend understanding of operations on whole numbers to fraction operations.**	**Perform operations and solve problems with fractions and decimals.**
1					Understand addition and subtraction of fractions as joining/composing and separating/decomposing parts referring to the same whole.	Estimate results of sums, differences and products with fractions and decimals to the thousandths.

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Number Sense and Operations in Fractions

2					Decompose a fraction into a sum of fractions with the same denominator and record each decomposition with an equation and justification.	Justify the reasonableness of a product when multiplying with fractions. a. Estimate the size of the product based on the size of the two factors. b. Explain why multiplying a given number by a fraction greater than 1 results in a product larger than the given number. c. Explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number. d. Explain why multiplying the numerator and denominator by the same number is equivalent to multiplying the fraction by 1.
3					Solve problems involving adding and subtracting fractions and mixed numbers with like denominators.	Solve problems involving addition and subtraction of fractions and mixed numbers with unlike denominators, and justify the solution.

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Number Sense and Operations in Fractions

4					Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	Extend the concept of multiplication to multiply a fraction or whole number by a fraction. a. Recognize the relationship between multiplying fractions and finding the areas of rectangles with fractional side lengths. b. Calculate and interpret the product of a fraction by a whole number and a whole number by a fraction. c. Calculate and interpret the product of two fractions less than one.
5					Solve problems involving multiplication of a fraction by a whole number.	Extend the concept of division to divide unit fractions and whole numbers by using visual fraction models and equations. a. Calculate and interpret the quotient of a unit fraction by a non-zero whole number. b. Calculate and interpret the quotient of a whole number by a unit fraction.

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Number Sense and Operations in Fractions

NF	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
C					**Understand decimal notation for fractions, and compare decimal fractions. (Denominators of 10 or 100)**	
1					Use decimal notation for fractions with denominators of 10 or 100.	
2					Understand that fractions and decimals are equivalent representations of the same quantity.	
3					Read, write and identify decimals to the hundredths place using number names, base ten numerals and expanded form.	
4					Compare two decimals to the hundredths place using the symbols >, = or <, and justify the solution.	

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Relationships and Algebraic Thinking

RA	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A	**Understand addition as putting together or adding to, and understand subtraction as taking apart or taking from.**	**Represent and solve problems involving addition and subtraction.**	**Add and subtract within 20.**	**Represent and solve problems involving multiplication and division.**	**Use the four operations with whole numbers to solve problems.**	**Represent and analyze patterns and relationships.**
1	Represent addition and subtraction within 10.	Use addition and subtraction within 20 to solve problems.	Demonstrate fluency with addition and subtraction within 20.	Interpret products of whole numbers.	Multiply or divide to solve problems involving a multiplicative comparison.	Investigate the relationship between two numeric patterns. a. Generate two numeric patterns given two rules. b. Translate two numeric patterns into two sets of ordered pairs. c. Graph numeric patterns on the Cartesian coordinate plane. d. Identify the relationship between two numeric patterns.
2	Demonstrate fluency for addition and subtraction within 5.	Solve problems that call for addition of three whole numbers whose sum is within 20.		Interpret quotients of whole numbers.	Solve multi-step whole number problems involving the four operations and variables and using estimation to interpret the reasonableness of the answer.	Write a rule to describe or explain a given numeric pattern.

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Relationships and Algebraic Thinking

3	Decompose numbers less than or equal to 10 in more than one way.	Develop the meaning of the equal sign and determine if equations involving addition and subtraction are true or false.		Describe in words or drawings a problem that illustrates a multiplication or division situation.	Solve whole number division problems involving variables in which remainders need to be interpreted, and justify the solution.	
4	Make 10 for any number from 1 to 9.	Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.		Use multiplication and division within 100 to solve problems.		
5				Determine the unknown number in a multiplication or division equation relating three whole numbers.		

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Relationships and Algebraic Thinking

RA	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
B		**Understand and apply properties of operations and the relationship between addition and subtraction.**	**Develop foundations for multiplication and division.**	**Understand properties of multiplication and the relationship between multiplication and division.**	**Work with factors and multiples.**	**Write and interpret numerical expressions.**
1		Use properties as strategies to add and subtract.	Determine if a set of objects has an odd or even number of members. a. Count by 2s to 100 starting with any even number. b. Express even numbers as pairings/groups of 2, and write an expression to represent the number using addends of 2. c. Express even numbers as being composed of equal groups and write an expression to represent the number with 2 equal addends.	Apply properties of operations as strategies to multiply and divide.	Recognize that a whole number is a multiple of each of its factors and find the multiples for a given whole number.	Write, evaluate and interpret numeric expressions using the order of operations.
2		Demonstrate that subtraction can be solved as an unknown-addend problem.	Find the total number of objects arranged in a rectangular array with up to 5 rows and 5 columns, and write an equation to represent the total as a sum of equal addends.		Determine if a whole number within 100 is composite or prime, and find all factor pairs for whole numbers within 100.	Translate written expressions into algebraic expressions.

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Relationships and Algebraic Thinking

RA	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
C		**Add and subtract within 20.**		**Multiply and divide within 100.**	**Generate and analyze patterns.**	**Use the four operations to represent and solve problems.**
1		Add and subtract within 20.		Multiply and divide with numbers and results within 100 using strategies such as the relationship between multiplication and division or properties of operations. Know all products of two one-digit numbers.	Generate a number pattern that follows a given rule.	Solve and justify multi-step problems involving variables, whole numbers, fractions and decimals.
2		Demonstrate fluency with addition and subtraction within 10.		Demonstrate fluency with products within 100.	Use words or mathematical symbols to express a rule for a given pattern.	

RA	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
D				**Use the four operations to solve word problems.**		
1				Write and solve two-step problems involving variables using any of the four operations.		

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2				Interpret the reasonableness of answers using mental computation and estimation strategies including rounding.		

RA	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
E				**Identify and explain arithmetic patterns.**		
1				Identify arithmetic patterns and explain the patterns using properties of operations.		

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Geometry and Measurement

GM	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A	**Reason with shapes and their attributes.**	**Reason with shapes and their attributes.**	**Reason with shapes and their attributes.**	**Reason with shapes and their attributes.**	**Classify 2-dimensional shapes by properties of their lines and angles.**	**Classify two- and three-dimensional geometric shapes.**
1	Describe several measureable attributes of objects.	Distinguish between defining attributes versus non-defining attributes; build and draw shapes that possess defining attributes.	Recognize and draw shapes having specified attributes, such as a given number of angles or sides. a. Identify triangles, quadrilaterals, pentagons, hexagons, circles and cubes. b. Identify the faces of three-dimensional objects.	Understand that shapes in different categories may share attributes and that the shared attributes can define a larger category.	Draw and identify points, lines, line segments, rays, angles, perpendicular lines and parallel lines.	Understand that attributes belonging to a category of figures also belong to all subcategories.
2	Compare the measurable attributes of two objects.	Compose and decompose two- and three-dimensional shapes to build an understanding of part-whole relationships and the properties of the original and composite shapes.	Partition a rectangle into rows and columns of same-size squares and count to find the total number of squares.	Distinguish rhombuses and rectangles as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to these subcategories.	Classify two-dimensional shapes by their sides and/or angles.	Classify figures in a hierarchy based on properties.

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Geometry and Measurement

3		Recognize two- and three-dimensional shapes from different perspectives and orientations.	Partition circles and rectangles into two, three or four equal shares, and describe the shares and the whole. a. Demonstrate that equal shares of identical wholes need not have the same shape.	Partition shapes into parts with equal areas, and express the area of each part as a unit fraction of the whole.	Construct lines of symmetry for a two-dimensional figure.	Analyze and describe the properties of prisms and pyramids.
4		Partition circles and rectangles into two or four equal shares, and describe the shares and the wholes verbally.				

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Geometry and Measurement

GM	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
B	**Work with time and money.**	**Measure lengths in non-standard units.**	**Measure and estimate lengths in standard units.**	**Solve problems involving the measurement of time, liquid volumes and weights of objects.**	**Understand the concepts of angle and measure angles.**	**Understand and compute volume.**
1	Demonstrate an understanding of concepts of time and devices that measure time.	Order three or more objects by length.	Measure the length of an object by selecting and using appropriate tools.	Tell and write time to the nearest minute.	Identify and estimate angles and their measure.	Understand the concept of volume and recognize that volume is measured in cubic units. a. Describe a cube with edge length 1 unit as a "unit cube" and is said to have "one cubic unit" of volume and can be used to measure volume. b. Understand that the volume of a right rectangular prism can be found by stacking multiple layers of the base.
2	Name the days of the week.	Compare the lengths of two objects indirectly by using a third object.	Analyze the results of measuring the same object with different units.	Estimate time intervals in minutes.	Draw and measure angles in whole-number degrees using a protractor.	Apply the formulas V = l × w × h and V = B × h for volume of right rectangular prisms with whole-number edge lengths.
3	Identify pennies, nickels, dimes and quarters.	Demonstrate the ability to measure length or distance using objects.	Estimate lengths using units of inches, feet, yards, centimeters and meters.	Solve problems involving addition and subtraction of minutes.		

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Geometry and Measurement

4			Measure to determine how much longer one object is than another.	Measure or estimate length, liquid volume and weight of objects.		
5				Use the four operations to solve problems involving lengths, liquid volumes or weights given in the same units.		

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Geometry and Measurement

GM	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
C	**Analyze squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres.**	**Work with time and money.**	**Relate addition and subtraction to length.**	**Understand concepts of area.**	**Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.**	**Graph points on the Cartesian coordinate plane within the first quadrant to solve problems.**
1	Identify shapes and describe objects in the environment using names of shapes, recognizing the name stays the same regardless of orientation or size.	Tell and write time in hours and half-hours using analog and digital clocks.	Use addition and subtraction within 100 to solve problems involving lengths that are given in the same units.	Calculate area by using unit squares to cover a plane figure with no gaps or overlaps.	Know relative sizes of measurement units within one system of units. a. Convert measurements in a larger unit in terms of a smaller unit.	Define a first quadrant Cartesian coordinate system. a. Represent the axes as scaled perpendicular number lines that both intersect at 0, the origin. b. Indentify any point on the Cartesian coordinate plane by its ordered pair coordinates. c. Define the first number in an ordered pair as the horizontal distance from the origin. d. Define the second number in an ordered pair as the vertical distance from the origin.

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Geometry and Measurement

2	Describe the relative positions of objects in space.	Know the value of a penny, nickel, dime and quarter.	Represent whole numbers as lengths on a number line, and represent whole-number sums and differences within 100 on a number line.	Label area measurements with squared units.	Use the four operations to solve problems involving distances, intervals of time, liquid volume, weight of objects and money.	Plot and interpret points in the first quadrant of the Cartesian coordinate plane.
3	Identify and describe the attribute of shapes, and use the attributes to sort a collection of shapes.			Demonstrate that tiling a rectangle to find the area and multiplying the side lengths result in the same value.	Apply the area and perimeter formulas for rectangles to solve problems.	
4	Draw or model simple two-dimensional shapes.			Multiply whole-number side lengths to solve problems involving the area of rectangles.		
5	Compose simple shapes to form larger shapes using manipulatives.			Find rectangular arrangements that can be formed for a given area.		
6				Decompose a rectangle into smaller rectangles to find the area of the original rectangle.		

GM	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
D			**Work with time and money.**	**Understand concepts of perimeter.**		**Solve problems involving measurement and conversions within a measurement system.**

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Geometry and Measurement

1			Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	Solve problems involving perimeters of polygons.		Convert measurements of capacity, length and weight within a given measurement system.
2			Describe a time shown on a digital clock as representing hours and minutes, and relate a time shown on a digital clock to the same time on an analog clock.	Understand that rectangles can have equal perimeters but different areas, or rectangles can have equal areas but different perimeters.		Solve multi-step problems that require measurement conversions.
3			Find the value of combinations of dollar bills, quarters, dimes, nickels and pennies, using $ and ¢ appropriately.			
4			Find combinations of coins that equal a given amount.			

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Data and Statistics

DS	Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
A	**Classify objects and count the number of objects in each category.**	**Represent and interpret data.**	**Represent and interpret data.**	**Represent and analyze data.**	**Represent and analyze data.**	**Represent and analyze data.**
1	Classify objects into given categories; count the number of objects in each category.	Collect, organize and represent data with up to three categories.	Create a line plot to represent a set of numeric data, given a horizontal scale marked in whole numbers.	Create frequency tables, scaled picture graphs and bar graphs to represent a data set with several categories.	Create a frequency table and/or line plot to display measurement data.	Create a line graph to represent a data set, and analyze the data to answer questions and solve problems.
2	Compare category counts using appropriate language.	Draw conclusions from object graphs, picture graphs, T-charts and tallies.	Generate measurement data to the nearest whole unit, and display the data in a line plot.	Solve one- and two-step problems using information presented in bar and/or picture graphs.	Solve problems involving addition and subtraction by using information presented in a data display.	Create a line plot to represent a given or generated data set, and analyze the data to answer questions and solve problems, recognizing the outliers and generating the median.
3			Draw a picture graph or a bar graph to represent a data set with up to four categories.	Create a line plot to represent data.	Analyze the data in a frequency table, line plot, bar graph or picture graph.	
4			Solve problems using information presented in line plots, picture graphs and bar graphs.	Use data shown in a line plot to answer questions.		
5			Draw conclusions from line plots, picture graphs and bar graphs.			

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Data and Statistics

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6-12 Mathematics
Missouri Learning Standards: Grade-Level Expectations

Missouri Department of Elementary and Secondary Education

Spring 2016

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Ratios and Proportional Relationships

RP	Grade 6	Grade 7	Grade 8
A	**Understand and use ratios to solve problems.**	**Analyze proportional relationships and use them to solve problems.**	
1	Understand a ratio as a comparison of two quantities and represent these comparisons.	Compute unit rates, including those that involve complex fractions, with like or different units.	
2	Understand the concept of a unit rate associated with a ratio, and describe the meaning of unit rate.	Recognize and represent proportional relationships between quantities. a. Determine when two quantities are in a proportional relationship. b. Identify and/or compute the constant of proportionality (unit rate). c. Explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation. d. Recognize that the graph of any proportional relationship will pass through the origin.	
3	Solve problems involving ratios and rates. a. Create tables of equivalent ratios, find missing values in the tables and plot the pairs of values on the Cartesian coordinate plane. b. Solve unit rate problems. c. Solve percent problems. d. Convert measurement units within and between two systems of measurement.	Solve problems involving ratios, rates, percentages and proportional relationships.	

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Number Sense and Operations

NS	Grade 6	Grade 7	Grade 8
A	**Apply and extend previous understandings of multiplication and division to divide fractions by fractions.**	**Apply and extend previous understandings of operations to add, subtract, multiply and divide rational numbers.**	**Know that there are numbers that are not rational, and approximate them by rational numbers.**
1	Compute and interpret quotients of positive fractions. a. Solve problems involving division of fractions by fractions.	Apply and extend previous understandings of numbers to add and subtract rational numbers. a. Add and subtract rational numbers. b. Represent addition and subtraction on a horizontal or vertical number line. c. Describe situations and show that a number and its opposite have a sum of 0 (additive inverses). d. Understand subtraction of rational numbers as adding the additive inverse. e. Determine the distance between two rational numbers on the number line is the absolute value of their difference. f. Interpret sums and differences of rational numbers.	Explore the real number system. a. Know the differences between rational and irrational numbers. b. Understand that all rational numbers have a decimal expansion that terminates or repeats. c. Convert decimals which repeat into fractions and fractions into repeating decimals. d. Generate equivalent representations of rational numbers.
2		Apply and extend previous understandings of numbers to multiply and divide rational numbers. a. Multiply and divide rational numbers. b. Determine that a number and its reciprocal have a product of 1 (multiplicative inverse). c. Understand that every quotient of integers (with non-zero divisor) is a rational number. d. Convert a rational number to a decimal. e. Understand that all rational numbers can be written as fractions or decimal numbers that terminate or repeat. f. Interpret products and quotients of rational numbers by describing real-world contexts.	Estimate the value and compare the size of irrational numbers and approximate their locations on a number line.
3		Solve problems involving the four arithmetic operations with rational numbers.	

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NS	Grade 6	Grade 7	Grade 8
B	**Compute with non-negative multi-digit numbers, and find common factors and multiples.**		
1	Demonstrate fluency with division of multi-digit whole numbers.		
2	Demonstrate fluency with addition, subtraction, multiplication and division of decimals.		
3	Find common factors and multiples. a. Find the greatest common factor (GCF) and the least common multiple (LCM). b. Use the distributive property to express a sum of two whole numbers with a common factor as a multiple of a sum of two whole numbers.		
NS	**Grade 6**	**Grade 7**	**Grade 8**
C	**Apply and extend previous understandings of numbers to the system of rational numbers.**		
1	Use positive and negative numbers to represent quantities.		
2	Locate a rational number as a point on the number line. a. Locate rational numbers on a horizontal or vertical number line. b. Write, interpret and explain problems of ordering of rational numbers. c. Understand that a number and its opposite (additive inverse) are located on opposite sides of zero on the number line.		

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Number Sense and Operations

3	Understand that the absolute value of a rational number is its distance from 0 on the number line.		
4	Extend prior knowledge to generate equivalent representations of rational numbers between fractions, decimals and percentages (limited to terminating decimals and/or benchmark fractions of 1/3 and 2/3).		

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Expressions, Equations and Inequalities

EEI	Grade 6	Grade 7	Grade 8
A	**Apply and extend previous understandings of arithmetic to algebraic expressions.**	**Use properties of operations to generate equivalent expressions.**	**Work with radicals and integer exponents.**
1	Describe the difference between an expression and an equation.	Apply properties of operations to simplify and to factor linear algebraic expressions with rational coefficients.	Know and apply the properties of integer exponents to generate equivalent expressions.
2	Create and evaluate expressions involving variables and whole number exponents. a. Identify parts of an expression using mathematical terminology. b. Evaluate expressions at specific values of the variables. c. Evaluate non-negative rational number expressions. d. Write and evaluate algebraic expressions. e. Understand the meaning of the variable in the context of the situation.	Understand how to use equivalent expressions to clarify quantities in a problem.	Investigate concepts of square and cube roots. a. Solve equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. b. Evaluate square roots of perfect squares less than or equal to 625 and cube roots of perfect cubes less than or equal to 1000. c. Recognize that square roots of non-perfect squares are irrational.
3	Identify and generate equivalent algebraic expressions using mathematical properties.		Express very large and very small quantities in scientific notation and approximate how many times larger one is than the other.
4			Use scientific notation to solve problems. a. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. b. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities.

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Expressions, Equations and Inequalities

EEI	Grade 6	Grade 7	Grade 8
B	**Reason about and solve one-variable equations and inequalities.**	**Solve problems using numerical and algebraic expressions and equations.**	**Understand the connections between proportional relationships, lines and linear equations.**
1	Use substitution to determine whether a given number in a specified set makes a one-variable equation or inequality true.	Solve multi-step problems posed with rational numbers. a. Convert between equivalent forms of the same number. b. Assess the reasonableness of answers using mental computation and estimation strategies.	Graph proportional relationships. a. Interpret the unit rate as the slope of the graph. b. Compare two different proportional relationships.
2	Understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true.	Write and/or solve linear equations and inequalities in one variable. a. Write and/or solve equations of the form $x+p = q$ and $px = q$ in which p and q are rational numbers. b. Write and/or solve two-step equations of the form $px + q = r$ and $p(x + q) = r$, where p, q and r are rational numbers, and interpret the meaning of the solution in the context of the problem. c. Write, solve and/or graph inequalities of the form $px + q > r$ or $px + q < r$, where p, q and r are rational numbers.	Apply concepts of slope and y-intercept to graphs, equations and proportional relationships. a. Explain why the slope (m) is the same between any two distinct points on a non-vertical line in the Cartesian coordinate plane. b. Derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b.
3	Write and solve equations using variables to represent quantities, and understand the meaning of the variable in the context of the situation.		
4	Solve one-step linear equations in one variable involving non-negative rational numbers.		

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5	Recognize that inequalities may have infinitely many solutions. a. Write an inequality of the form $x > c$, $x < c$, $x \geq c$, or $x \leq c$ to represent a constraint or condition. b. Graph the solution set of an inequality.		
EEI	**Grade 6**	**Grade 7**	**Grade 8**
C	**Represent and analyze quantitative relationships between dependent and independent variables.**		**Analyze and solve linear equations and inequalities and pairs of simultaneous linear equations.**
1	Identify and describe relationships between two variables that change in relationship to one another. a. Write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. b. Analyze the relationship between the dependent and independent variables using graphs, tables and equations and relate these representations to each other.		Solve linear equations and inequalities in one variable. a. Create and identify linear equations with one solution, infinitely many solutions or no solutions. b. Solve linear equations and inequalities with rational number coefficients, including equations and inequalities whose solutions require expanding expressions using the distributive property and combining like terms.
2			Analyze and solve systems of linear equations. a. Graph systems of linear equations and recognize the intersection as the solution to the system. b. Explain why solution(s) to a system of two linear equations in two variables correspond to point(s) of intersection of the graphs. c. Explain why systems of linear equations can have one solution, no solution or infinitely many solutions. d. Solve systems of two linear equations.

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Geometry and Measurement

GM	Grade 6	Grade 7	Grade 8
A	**Solve problems involving area, surface area and volume.**	**Draw and describe geometrical figures and describe the relationships between them.**	**Understand congruence and similarity using physical models, transparencies or geometry software.**
1	Find the area of polygons by composing or decomposing the shapes into rectangles or triangles.	Solve problems involving scale drawings of real objects and geometric figures, including computing actual lengths and areas from a scale drawing and reproducing the drawing at a different scale.	Verify experimentally the congruence properties of rigid transformations. a. Verify that angle measure, betweeness, collinearity and distance are preserved under rigid transformations. b. Investigate if orientation is preserved under rigid transformations.
2	Find the volume of right rectangular prisms. a. Understand that the volume of a right rectangular prism can be found by filling the prism with multiple layers of the base. b. Apply V = l * w * h and V = Bh to find the volume of right rectangular prisms.	Use a variety of tools to construct geometric shapes. a. Determine if provided constraints will create a unique triangle through construction. b. Construct special quadrilaterals given specific parameters.	Understand that two-dimensional figures are congruent if a series of rigid transformations can be performed to map the pre-image to the image. a. Describe a possible sequence of rigid transformations between two congruent figures.
3	Solve problems by graphing points in all four quadrants of the Cartesian coordinate plane. a. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the Cartesian coordinate plane b. Recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. c. Find distances between points with the same first coordinate or the same second coordinate. d. Construct polygons in the Cartesian coordinate plane.	Describe two-dimensional cross sections of pyramids, prisms, cones and cylinders.	Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates.

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Geometry and Measurement

4	Solve problems using nets. a. Represent three-dimensional figures using nets made up of rectangles and triangles. b. Use nets to find the surface area of three-dimensional figures whose sides are made up of rectangles and triangles.	Understand concepts of circles. a. Analyze the relationships among the circumference, the radius, the diameter, the area and Pi in a circle. b. Know and apply the formulas for circumference and area of circles to solve problems.	Understand that two-dimensional figures are similar if a series of transformations (rotations, reflections, translations and dilations) can be performed to map the pre-image to the image. a. Describe a possible sequence of transformations between two similar figures.
5			Explore angle relationships and establish informal arguments. a. Derive the sum of the interior angles of a triangle. b. Explore the relationship between the interior and exterior angles of a triangle. c. Construct and explore the angles created when parallel lines are cut by a transversal. d. Use the properties of similar figures to solve problems.

GM	Grade 6	Grade 7	Grade 8
B		**Apply and extend previous understanding of angle measure, area and volume.**	**Understand and apply the Pythagorean Theorem.**
1		Use angle properties to write and solve equations for an unknown angle.	Use models to demonstrate a proof of the Pythagorean Theorem and its converse.
2		Understand the relationship between area, surface area and volume. a. Find the area of triangles, quadrilaterals and other polygons composed of triangles and rectangles. b. Find the volume and surface area of prisms, pyramids and cylinders.	Use the Pythagorean Theorem to determine unknown side lengths in right triangles in problems in two- and three-dimensional contexts.
3			Use the Pythagorean Theorem to find the distance between points in a Cartesian coordinate system.

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Geometry and Measurement

GM	Grade 6	Grade 7	Grade 8
C			**Solve problems involving volume of cones, pyramids and spheres.**
1			Solve problems involving surface area and volume. a. Understand the concept of surface area and find surface area of pyramids. b. Understand the concepts of volume and find the volume of pyramids, cones and spheres.

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Data Analysis, Statistics and Probability

DSP	Grade 6	Grade 7	Grade 8
A	**Develop understanding of statistical variability.**	**Use random sampling to draw inferences about a population.**	**Investigate patterns of association in bivariate data.**
1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.	Understand that statistics can be used to gain information about a population by examining a sample of the population. a. Understand that a sample is a subset of a population. b. Understand that generalizations from a sample are valid only if the sample is representative of the population. c. Understand that random sampling is used to produce representative samples and support valid inferences.	Construct and interpret scatter plots of bivariate measurement data to investigate patterns of association between two quantities.
2	Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape.	Use data from multiple samples to draw inferences about a population and investigate variability in estimates of the characteristic of interest.	Generate and use a trend line for bivariate data, and informally assess the fit of the line.
3	Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary from a single number.		Interpret the parameters of a linear model of bivariate measurement data to solve problems.
4			Understand the patterns of association in bivariate categorical data displayed in a two-way table. a. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. b. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.

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Data Analysis, Statistics and Probability

DSP	Grade 6	Grade 7	Grade 8
B	**Summarize and describe distributions.**	**Draw informal comparative inferences about two populations.**	
1	Display and interpret data. a. Use dot plots, histograms and box plots to display and interpret numerical data. b. Create and interpret circle graphs.	Analyze different data distributions using statistical measures.	
2	Summarize numerical data sets in relation to the context. a. Report the number of observations. b. Describe the nature of the attribute under investigation, including how it was measured and its units of measurement. c. Give quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context of the data. d. Analyze the choice of measures of center and variability based on the shape of the data distribution and/or the context of the data.	Compare the numerical measures of center, measures of frequency and measures of variability from two random samples to draw inferences about the population.	
DSP	**Grade 6**	**Grade 7**	**Grade 8**
C		**Develop, use and evaluate probability models.**	
1		Investigate the probability of chance events. a. Determine probabilities of simple events. b. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.	
2		Investigate the relationship between theoretical and experimental probabilities for simple events. a. Predict outcomes using theoretical probability. b. Perform experiments that model theoretical	

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Data Analysis, Statistics and Probability

		probability. c. Compare theoretical and experimental probabilities.	
3		Explain possible discrepancies between a developed probability model and observed frequencies. a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process.	
4		Find probabilities of compound events using organized lists, tables, tree diagrams and simulations. a. Represent the sample space of a compound event. b. Design and use a simulation to generate frequencies for compound events.	

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Functions

F	Grade 6	Grade 7	Grade 8
A			**Define, evaluate and compare functions.**
1			Explore the concept of functions. (The use of function notation is not required.) a. Understand that a function assigns to each input exactly one output. b. Determine if a relation is a function. c. Graph a function.
2			Compare characteristics of two functions each represented in a different way.
3			Investigate the differences between linear and nonlinear functions. a. Interpret the equation y = mx + b as defining a linear function, whose parameters are the slope (m) and the y-intercept (b). b. Recognize that the graph of a linear function has a constant rate of change c. Give examples of nonlinear functions.

F	Grade 6	Grade 7	Grade 8
B			**Use functions to model relationships between quantities.**
1			Use functions to model linear relationships between quantities. a. Explain the parameters of a linear function based on the context of a problem. b. Determine the parameters of a linear function. c. Determine the x-intercept of a linear function.
2			Describe the functional relationship between two quantities from a graph or a verbal description.

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Functions

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Number and Quantity

NQ	Algebra 1	Algebra 2
A	**Extend and use properties of rational exponents.**	**Extend and use the relationship between rational exponents and radicals.**
1	Explain how the meaning of rational exponents extends from the properties of integer exponents.	Extend the system of powers and roots to include rational exponents.
2	Rewrite expressions involving radicals and rational exponents using the properties of exponents. Limit to rational exponents with a numerator of 1.	Create and recognize equivalent expressions involving radical and exponential forms of expressions.
3		Add, subtract, multiply and divide radical expressions.
4		Solve equations involving rational exponents and/or radicals and identify situations where extraneous solutions may result.

NQ	Algebra 1	Algebra 2
B	**Use units to solve problems.**	**Use complex numbers.**
1	Use units of measure as a way to understand and solve problems involving quantities. a. Identify, label and use appropriate units of measure within a problem. b. Convert units and rates. c. Use units within problems. d. Choose and interpret the scale and the origin in graphs and data displays.	Represent complex numbers.
2	Define and use appropriate quantities for representing a given context or problem.	Add, subtract, multiply and divide complex numbers.
3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.	Know and apply the Fundamental Theorem of Algebra.

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Seeing Structure in Expressions

SSE	Algebra 1	Algebra 2
A	**Interpret and use structure.**	**Define and use logarithms.**
1	Interpret the contextual meaning of individual terms or factors from a given problem that utilizes formulas or expressions.	Develop the definition of logarithms based on properties of exponents.
2	Analyze the structure of polynomials to create equivalent expressions or equations.	Use the inverse relationship between exponents and logarithms to solve exponential and logarithmic equations.
3	Choose and produce equivalent forms of a quadratic expression or equations to reveal and explain properties. a. Find the zeros of a quadratic function by rewriting it in factored form. b. Find the maximum or minimum value of a quadratic function by completing the square.	Use properties of logarithms to solve equations or find equivalent expressions.
4		Understand why logarithmic scales are used, and use them to solve problems.

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Creating Equations

CED	Algebra 1	Algebra 2
A	**Create equations that describe linear, quadratic and exponential relationships.**	
1	Create equations and inequalities in one variable and use them to model and/or solve problems.	
2	Create and graph linear, quadratic and exponential equations in two variables.	
3	Represent constraints by equations or inequalities and by systems of equations or inequalities, and interpret the data points as a solution or non-solution in a modeling context.	
4	Solve literal equations and formulas for a specified variable that highlights a quantity of interest.	

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Reasoning with Equations and Inequalities

REI	Algebra 1	Algebra 2
A	**Understand solving equations as a process, and solve equations and inequalities in one variable.**	**Solve equations and inequalities.**
1	Explain how each step taken when solving an equation or inequality in one variable creates an equivalent equation or inequality that has the same solution(s) as the original.	Create and solve equations and inequalities, including those that involve absolute value.
2	Solve problems involving quadratic equations. a. Use the method of completing the square to create an equivalent quadratic equation. b. Derive the quadratic formula. c. Analyze different methods of solving quadratic equations.	Solve rational equations where numerators and denominators are polynomials and where extraneous solutions may result.

REI	Algebra 1	Algebra 2
B	**Solve systems of equations.**	**Solve general systems of equations and inequalities.**
1	Solve a system of linear equations algebraically and/or graphically.	Create and solve systems of equations that may include non-linear equations and inequalities.
2	Solve a system consisting of a linear equation and a quadratic equation algebraically and/or graphically.	
3	Justify that the technique of linear combination produces an equivalent system of equations.	

REI	Algebra 1	Algebra 2
C	**Represent and solve linear and exponential equations and inequalities graphically.**	
1	Explain that the graph of an equation in two variables is the set of all its solutions plotted in the Cartesian coordinate plane.	

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Reasoning with Equations and Inequalities

2	Graph the solution to a linear inequality in two variables.	
3	Solve problems involving a system of linear inequalities.	

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Arithmetic with Polynomials and Rational Expressions

APR	Algebra 1	Algebra 2
A	**Perform operations on polynomials.**	**Perform operations on polynomials and rational expressions.**
1	Add, subtract and multiply polynomials, and understand that polynomials follow the same general rules of arithmetic and are closed under these operations.	Extend the knowledge of factoring to include factors with complex coefficients.
2	Divide polynomials by monomials.	Understand the Remainder Theorem and use it to solve problems.
3		Find the least common multiple of two or more polynomials.
4		Add, subtract, multiply and divide rational expressions.
5		Identify zeros of polynomials when suitable factorizations are available, and use the zeros to sketch the function defined by the polynomial.

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Interpreting Functions

IF	Algebra 1	Algebra 2
A	**Understand the concept of a function and use function notation.**	**Use and interpret functions.**
1	Understand that a function from one set (domain) to another set (range) assigns to each element of the domain exactly one element of the range. a. Represent a function using function notation. b. Understand that the graph of a function labeled f is the set of all ordered pairs (x, y) that satisfy the equation $y=f(x)$.	Identify and interpret key characteristics of functions represented graphically, with tables and with algebraic symbolism to solve problems.
2	Use function notation to evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	Translate between equivalent forms of functions.
IF	**Algebra 1**	**Algebra 2**
B	**Interpret linear, quadratic and exponential functions in terms of the context.**	
1	Using tables, graphs and verbal descriptions, interpret key characteristics of a function that models the relationship between two quantities.	
2	Relate the domain and range of a function to its graph and, where applicable, to the quantitative relationship it describes.	
3	Determine the average rate of change of a function over a specified interval and interpret the meaning.	
4	Interpret the parameters of a linear or exponential function in terms of the context.	
IF	**Algebra 1**	**Algebra 2**
C	**Analyze linear, quadratic and exponential functions using different representations.**	
1	Graph functions expressed symbolically and identify and interpret key features	

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	of the graph.	
2	Translate between different but equivalent forms of a function to reveal and explain properties of the function and interpret these in terms of a context.	
3	Compare the properties of two functions given different representations.	

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Building Functions

BF	Algebra 1	Algebra 2
A	**Build new functions from existing functions (limited to linear, quadratic and exponential).**	**Create new functions from existing functions.**
1	Analyze the effect of translations and scale changes on functions.	Create new functions by applying the four arithmetic operations and composition of functions (modifying the domain and range as necessary).
2		Derive inverses of functions, and compose the inverse with the original function to show that the functions are inverses.
3		Describe the effects of transformations algebraically and graphically, creating vertical and horizontal translations, vertical and horizontal reflections and dilations (expansions/compressions) for linear, quadratic, cubic, square and cube root, absolute value, exponential and logarithmic functions.

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Modeling

FM	Algebra 1	Algebra 2
A		**Use functions to model real-world problems.**
1		Create functions and use them to solve applications of quadratic and exponential function model problems.

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Linear, Quadratic and Exponential Models

LQE	Algebra 1	Algebra 2
A	**Construct and compare linear, quadratic and exponential models and solve problems.**	
1	Distinguish between situations that can be modeled with linear or exponential functions. a. Determine that linear functions change by equal differences over equal intervals. b. Recognize exponential situations in which a quantity grows or decays by a constant percent rate per unit interval.	
2	Describe, using graphs and tables, that a quantity increasing exponentially eventually exceeds a quantity increasing linearly or quadratically.	
3	Construct linear, quadratic and exponential equations given graphs, verbal descriptions or tables.	

LQE	Algebra 1	Algebra 2
B	**Use arithmetic and geometric sequences.**	
1	Write arithmetic and geometric sequences in recursive and explicit forms, and use them to model situations and translate between the two forms.	
2	Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the set of integers.	
3	Find the terms of sequences given an explicit or recursive formula.	

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Data and Statistical Analysis

DS	Algebra 1	Algebra 2
A	**Summarize, represent and interpret data.**	**Make inferences and justify conclusions.**
1	Analyze and interpret graphical displays of data.	Analyze how random sampling could be used to make inferences about population parameters.
2	Use statistics appropriate to the shape of the data distribution to compare center and spread of two or more different data sets.	Determine whether a specified model is consistent with a given data set.
3	Interpret differences in shape, center and spreads in the context of the data sets, accounting for possible effects of outliers.	Describe and explain the purposes, relationship to randomization and differences among sample surveys, experiments and observational studies.
4	Summarize data in two-way frequency tables. a. Interpret relative frequencies in the context of the data. b. Recognize possible associations and trends in the data.	Use data from a sample to estimate characteristics of the population and recognize the meaning of the margin of error in these estimates.
5	Construct a scatter plot of bivariate quantitative data describing how the variables are related; determine and use a function that models the relationship. a. Construct a linear function to model bivariate data represented on a scatter plot that minimizes residuals. b. Construct an exponential function to model bivariate data represented on a scatter plot that minimizes residuals.	Describe and explain how the relative sizes of a sample and the population affect the margin of error of predictions.
6	Interpret the slope (rate of change) and the y-intercept (constant term) of a linear model in the context of the data.	Analyze decisions and strategies using probability concepts.
7	Determine and interpret the correlation coefficient for a linear association.	Evaluate reports based on data.
8	Distinguish between correlation and causation.	

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Data and Statistical Analysis

DS	Algebra 1	Algebra 2
B		**Fit a data set to a normal distribution.**
1		Know and use the characteristics of normally distributed data sets; predict what percentage of the data will be above or below a given value that is a multiple of standard deviations above or below the mean.
2		Fit a data set to a distribution using its mean and standard deviation to determine whether the data is approximately normally distributed.

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Congruence

CO	Geometry
A	**Experiment with transformations in the plane.**
1	Define angle, circle, perpendicular line, parallel line, line segment and ray based on the undefined notions of point, line, distance along a line and distance around a circular arc.
2	Represent transformations in the plane, and describe them as functions that take points in the plane as inputs and give other points as outputs.
3	Describe the rotational symmetry and lines of symmetry of two-dimensional figures.
4	Develop definitions of rotations, reflections and translations in terms of angles, circles, perpendicular lines, parallel lines and line segments.
5	Demonstrate the ability to rotate, reflect or translate a figure, and determine a possible sequence of transformations between two congruent figures.
CO	**Geometry**
B	**Understand congruence in terms of rigid motions.**
1	Develop the definition of congruence in terms of rigid motions.
2	Develop the criteria for triangle congruence from the definition of congruence in terms of rigid motions.
CO	**Geometry**
C	**Prove geometric theorems.**
1	Prove theorems about lines and angles.
2	Prove theorems about triangles.
3	Prove theorems about polygons.

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Congruence

CO	**Geometry**
D	**Make geometric constructions.**
1	Construct geometric figures using various tools and methods.

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Similarity, Right Triangles, and Trigonometry

SRT	Geometry
A	**Understand similarity in terms of similarity transformations.**
1	Construct and analyze scale changes of geometric figures.
2	Use the definition of similarity to decide if figures are similar and to solve problems involving similar figures.
3	Use the properties of similarity transformations to establish the AA criterion for two triangles to be similar.
SRT	**Geometry**
B	**Prove theorems involving similarity.**
1	Use congruence and similarity criteria for triangles to solve problems and to prove relationships in geometric figures.
SRT	**Geometry**
C	**Define trigonometric ratios, and solve problems involving right triangles.**
1	Understand that side ratios in right triangles define the trigonometric ratios for acute angles.
2	Explain and use the relationship between the sine and cosine of complementary angles.
3	Use trigonometric ratios and the Pythagorean Theorem to solve right triangles.
4	Derive the formula A = 1/2 ab sin(C) for the area of a triangle.

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Circles

C	Geometry
A	**Understand and apply theorems about circles.**
1	Prove that all circles are similar using similarity transformations.
2	Identify and describe relationships among inscribed angles, radii and chords of circles.
3	Construct the inscribed and circumscribed circles of a triangle, and prove properties of angles for a quadrilateral inscribed in a circle.

C	Geometry
B	**Find arc lengths and areas of sectors of circles.**
1	Derive the formula for the length of an arc of a circle.
2	Derive the formula for the area of a sector of a circle.

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Exploring Geometric Properties with Equations

GPE	Geometry
A	**Translate between the geometric description and the equation for a conic section.**
1	Derive the equation of a circle.
2	Derive the equation of a parabola given a focus and directrix.
GPE	**Geometry**
B	**Use coordinates to prove geometric theorems algebraically.**
1	Use coordinates to prove geometric theorems algebraically.
2	Prove the slope criteria for parallel and perpendicular lines and use them to solve problems.
3	Find the point on a directed line segment between two given points that partitions the segment in a given ratio.
4	Use coordinates to compute perimeters of polygons and areas of triangles and rectangles.

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Geometric Measurement and Dimension

GMD	Geometry
A	**Explain volume formulas and use them to solve problems.**
1	Give an informal argument for the formulas for the circumference of a circle, area of a circle, volume of a cylinder, pyramid and cone.
2	Use volume formulas for cylinders, pyramids, cones, spheres and composite figures to solve problems.

GMD	Geometry
B	**Visualize relationships between two-dimensional and three-dimensional objects.**
1	Identify the shapes of two-dimensional cross-sections of three-dimensional objects.
2	Identify three-dimensional objects generated by transformations of two-dimensional objects.

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Modeling with Geometry

MG	Geometry
A	**Apply geometric concepts in modeling situations.**
1	Use geometric shapes, their measures and their properties to describe objects.
2	Apply concepts of density based on area and volume in modeling situations.
3	Apply geometric methods to solve design mathematical modeling problems.

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Conditional Probability and Rules of Probability

CP	Geometry
A	**Understand independence and conditional probability and use them to interpret data.**
1	Describe events as subsets of a sample space using characteristics of the outcomes, or as unions, intersections or complements of other events.
2	Understand the definition of independent events and use it to solve problems.
3	Calculate conditional probabilities of events.
4	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities.
5	Recognize and explain the concepts of conditional probability and independence in a context.
6	Apply and interpret the Addition Rule for calculating probabilities.
7	Apply and Interpret the general Multiplication Rule in a uniform probability model.
8	Use permutations and combinations to solve problems.

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An Important Note Regarding Post-Algebra 2 Mathematical Studies*

It is strongly recommended by the Missouri Department of Higher Education, and by this standards-writing group that for students to be college-ready, students must take a mathematics course during their senior year in high school. Many Missouri high school students will be enrolled in Algebra 2 during the sophomore or junior year of high school and accordingly, should plan to take additional coursework in mathematics each year thereafter prior to graduation. Some of the additional topics listed below are specifically recommended by the Missouri Department of Higher Education's Curriculum Alignment Initiative; others are topics that have been traditionally covered in Honors Algebra 2 classes or fourth year mathematics classes. However, it is very important to note that there are many other topics that could be included in a pre-calculus course.

- Using a unit circle, create the functions $f(t) = \sin(t)$ and $g(t) = \cos(t)$ to define the position of a point on the circle, at time t. Graph these functions in the Cartesian coordinate plane, and define and explore amplitude, period and midline.
- Use parameter changes to amplitude, period, midline and phase shift to model real-world contexts. Use the form $f(t) = A \sin(B(t+h)) + k$ and explain how to determine each of the parameters A, B, h and k.
- Solve equations involving trigonometric functions.
- Solve problems using trigonometric identities.
- Solve problems using Law of Sines and Law of Cosines.
- Graph using polar coordinates.
- Perform partial fraction decomposition of rational functions.
- Perform operations with matrices and vectors.
- Analyze and graph rational functions.

*Excerpted from the secondary mathematics learning standards submitted by the 1490 workgroup to the Missouri State Board of Education on October 1, 2015.

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K-5 Science
Missouri Learning Standards: Grade-Level Expectations

Missouri Department of Elementary and Secondary Education
Spring 2016

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	PS1 - Matter and Its Interactions					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Structure and Properties of Matter**	Make qualitative observations of the physical properties of objects (i.e., size, shape, color, mass).		Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. [Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.] Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. [Clarification Statement: Examples of properties could include, strength, flexibility, hardness, texture, and absorbency.]	Predict and investigate that water can change from a liquid to a solid (freeze), and back again (melt), or from a liquid to a gas (evaporation), and back again (condensation) as the result of temperature changes.		Develop a model to describe that matter is made of particles too small to be seen. [Clarification Statement: Examples of evidence supporting a model could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.] Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. [Clarification Statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances.]

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	PS1 - Matter and Its Interactions					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Types of Interactions of Matter**				Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.		Plan and conduct investigations to separate the components of a mixture/solution by their physical properties (i.e., sorting, filtration, magnets, screening). Conduct an investigation to determine whether the combining of two or more substances results in new substances.

	PS2 - Motion and Stability: Forces and Interactions					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Forces and Motion**	Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.] Describe ways to change the motion of an object (i.e., how to cause an object to go slower, go faster, go farther, change direction, stop).		Analyze data to determine how the motion of an object changed by an applied force or the mass of an object.		Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. [Clarification Statement: Examples could include an unbalanced force on one side of a ball can make it start moving; and, balanced forces pushing on a box from both sides will not produce any motion at all.]	

	PS2 - Motion and Stability: Forces and Interactions					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B				Plan and conduct investigations to determine the cause and effect relationship of electric or magnetic interactions between two objects not in contact with each other. [Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper; examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paperclips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.]	Plan and conduct a fair test to compare and contrast the forces (measured by a spring scale in Newtons) required to overcome friction when an object moves over different surfaces (i.e., rough/smooth). Predict how changes in either the amount of force applied to an object or the mass of the object affects the motion (speed and direction) of the object.	Support an argument that the gravitational force exerted by Earth on objects is directed toward the planet's center. [Clarification Statement: "Down" is a local description of the direction that points toward the center of the spherical Earth.]
Types of Interaction						

	PS3 - Energy					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Definitions of Energy**	Make observations to determine the effect of sunlight on Earth's surface.	Identify the source of energy that causes an increase in the temperature of an object (e.g., Sun, stove, flame, light bulb).			Use evidence to construct an explanation relating the speed of an object to the energy of that object.	

	PS3 - Energy					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Conservation of Energy and Energy Transfer**	With prompting and support, use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area				Provide evidence to construct an explanation of an energy transformation(e.g. temperature change, light, sound, motion, and magnetic effects) Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. [Clarification Statement: Examples of devices could include electric circuits that convert electrical energy into motion energy of a vehicle, light, or sound; and, a passive solar heater that converts light into heat. Examples of constraints could include the materials, cost, or time to design the device.]	

	PS3 - Energy					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C					Use models to explain that simple machines	

Relationship Between Energy and Forces					change the amount of effort force and/or direction of force. [Clarification Statement: memorization of a simple machine is not the focus, concept builds on the application of force and motion .]	

	PS3 - Energy					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
D						Use models to describe that energy stored in food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. [Clarification Statement: Examples of models could include diagrams, and flow charts.]
Energy in Chemical Process and Everyday						

	PS4 - Waves and Their Applications in technologies for Information Transfer					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A		Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. [Clarification Statement: Examples of vibrating materials that make sound could include tuning forks and plucking a stretched string. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.]	Plan and conduct investigations to provide evidence that changes in vibration create change in sound.		Develop a model of waves to describe patterns in terms of amplitude or wavelength and that waves can cause objects to move. (Boundary: The terms amplitude and wavelength should not be assessed.) [Clarification Statement: Examples of models could include diagrams, analogies, and physical models using wire to illustrate wavelength and amplitude of waves.]	Develop a model to describe that objects can be seen only when light is reflected off them or when they produce their own light.
Wave Properties						

	PS4 - Waves and Their Applications in technologies for Information Transfer					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B						
Electromagnetic Radiation						

	PS4 - Waves and Their Applications in technologies for Information Transfer					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C		Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. [Clarification Statement: Examples of devices could include a light source to send signals, paper cup and string "telephones," and a pattern of drum beats.]				
Information Technologies and Instrumentation						

	LS1 - From Molecules to Organisms: Structure and Processes					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A		Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. [Clarification Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.]		Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and plant reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.]	Compare and contrast the major organs/organ systems (e.g. support, reproductive, digestive, transport/circulatory, excretory, response) that perform similar functions for animals belonging to different vertebrate classes.
Structure and Function						

	LS1 - From Molecules to Organisms: Structure and Processes					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Growth and Development of Organisms**				Develop a model to compare and contrast observations on the life cycle of different plants and animals. [Clarification Statement: Changes organisms go through during their life form a pattern.]		

	LS1 - From Molecules to Organisms: Structure and Processes					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C	Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the					Support an argument that plants get the materials (i.e. carbon dioxide, water, sunlight) they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil. Clarification Statement: [Do not assess photosynthesis.]

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Organization for Matter and Energy Flow in Organisms	requirement of plants to have light; and, that all living things need water.]					

	LS1 - From Molecules to Organisms: Structure and Processes					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
D					Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. [Clarification Statement: Emphasis is on systems of information transfer.]	
Information Processing						

	LS2 - Ecosystems: Interactions, Energy, and Dynamics					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A			Plan and conduct investigations on the growth of plants when growing conditions are altered (e.g., dark vs. light, water vs. no water). Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.			
Interdependent Relationships in Ecosystems						

	LS2 - Ecosystems: Interactions, Energy, and Dynamics					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B						Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food.

Cycles of matter and Energy Transfer in Ecosystems						Examples of systems could include organisms, ecosystems, and the Earth.]

	LS3 - Heredity: Inheritance and Variation of Traits					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Inheritance of Traits**		Make observations to construct an evidence based account that young plants and animals are like, but not exactly like, their parents. [Clarification Statement: Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same.]		Construct scientific arguments to support claims that some characteristics of organisms are inherited from parents and some are influenced by the environment. [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]		

	LS3 - Heredity: Inheritance and Variation of Traits					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Natural Selection**				Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving and finding mates. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]		

	LS3 - Heredity: Inheritance and Variation of Traits					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C **Adaptation**				Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]		

	LS3 - Heredity: Inheritance and Variation of Traits					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
D **Biodiversity and Humans**				Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]		

	ESS1 - Earth's Place in the Universe					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **The Universe and its Stars**		Describe the presence of the Sun, Moon, and stars in the sky over time. Use observations of the sun, moon, and stars to describe patterns that can be predicted. [Clarification Statement: Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.]				Support an argument that relative distances from Earth affects the apparent brightness of the sun compared to other stars.

	ESS1 - Earth's Place in the Universe					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Earth and the Solar System**	Make observations during different seasons to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.]					Make observations during different seasons to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.] Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. [Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.]

	ESS1 - Earth's Place in the Universe					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C			Use information from several sources to provide evidence that Earth events can occur quickly or slowly. [Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.]		Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. [Clarification Statement: Examples of evidence from patterns could include rock layers with marine shell fossils above rock layers with plant fossils and no shells, indicating a change from land to water over time; and, a canyon with different rock layers in the walls and a river in the bottom, indicating that over time a river cut through the rock.]	
The History of Planet Earth						

	ESS2 - Earth's Systems					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A)			Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. [Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.]		Plan and conduct scientific investigations or simulations to provide evidence how natural processes (e.g. weathering and erosion) shape Earth's surfaces.	Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification Statement: Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.]
Earth Materials and Systems						

	ESS2 - Earth's Systems					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B			Develop a model to represent the shapes and kinds of land and bodies of water in an area.		Analyze and interpret data from maps to describe patterns of Earth's features. [Clarification Statement: Maps can include topographic maps of Earth's land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.]	
Plate Tectonics and Large-Scale Systems						

	ESS2 - Earth's Systems					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C			Obtain information to identify where water is found on Earth and that it can be solid or liquid.			Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.
The Role of Water in Earth's Surface Processes						

	ESS2 - Earth's Systems					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
D **Weather and Climate**	Use and share observations of local weather conditions to describe patterns over time. [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.]	Identify patterns indicating relationships between observed weather data and weather phenomena (e.g., temperature and types of precipitation, clouds and amounts of precipitation).		Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. [Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.] Obtain and combine information to describe climates in different regions of the world.		

	ESS2 - Earth's Systems					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
E **Biogeology**	With prompting and support, construct an argument using evidence for how plants and animals (including but not limited to humans) can change the environment to meet their needs.					

	ESS3 - Earth and Human Activity					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Natural Resources**	Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.				Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. [Clarification Statement: Examples of solutions could include designing an earthquake resistant building and improving monitoring of volcanic activity.]	

	ESS3 - Earth and Human Activity					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B	Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.			Make a claim about the merit of an existing design solution (e.g. levies, tornado shelters, sea walls, etc.) that reduces the impacts of a weather-related		

Natural Hazards				hazard. [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]		

	ESS3 - Earth and Human Activity					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C						Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
Human Impacts on Earth's Systems						

	ETS1 - Engineering Design					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
A **Defining and Delimiting Engineering Problems**	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

	ETS1 - Engineering Design					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
B **Developing Possible Solutions**	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

	ETS1 - Engineering Design					
	Grade K	**Grade 1**	**Grade 2**	**Grade 3**	**Grade 4**	**Grade 5**
C **Optimizing the Solution Process**	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

6-12 Science
Missouri Learning Standards: Grade-Level Expectations

Missouri Department of Elementary and Secondary Education
Spring 2016

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PS1 - Matter and Its Interactions		
Concept	**Middle School**	**High School**
A **Structure and Properties of Matter**	6-8-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures. [Clarification Statement: Emphasis is on developing models of molecules that vary in complexity. Examples of simple molecules could include ammonia and methanol. Examples of extended structures could include sodium chloride or diamonds. Examples of molecular-level models could include drawings, 3D ball and stick structures, or computer representations showing different molecules with different types of atoms. 6-8-PS1-2 Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. [Clarification Statement: Examples of reactions could include burning sugar or steel wool, fat reacting with sodium hydroxide, and mixing zinc with hydrogen chloride.] 6-8-PS1-3 Gather, analyze, and present information to describe that synthetic materials come from natural resources and how they impact society. [Clarification Statement: Emphasis is on natural resources that undergo a chemical process to form the synthetic material. Examples of new materials could include new medicine, foods, and alternative fuels.] 6-8-PS1-4 Develop a model that describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. [Clarification Statement: Emphasis is on qualitative molecular-level models of solids, liquids, and gases to show that adding or removing thermal energy increases or decreases kinetic energy of the particles until a change of state occurs. Examples of models could include drawings and diagrams. Examples of particles could include molecules or inert atoms. Examples of pure substances could include water, carbon dioxide, and helium.]	9-12-PS1 -1 Use the organization of the periodic table to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. [Clarification Statement: Examples of properties that could be predicted from patterns could include reactivity of metals, types of bonds formed, numbers of bonds formed, and reactions with oxygen.] 9-12-PS1-2 Construct and revise an explanation for the products of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. [Clarification Statement: Examples of chemical reactions could include the reaction of sodium and chlorine, or of oxygen and hydrogen.] 9-12-PS1-3 Plan and conduct an investigation to gather evidence to compare physical and chemical properties of substances such as melting point, boiling point, vapor pressure, surface tension, and chemical reactivity to infer the relative strength of attractive forces between particles. [Clarification Statement: Emphasis is on understanding the relative strengths of forces between particles. Examples of particles could include ions, atoms, molecules, and networked materials (such as graphite). 9-12-PS1-4 Apply the concepts of bonding and crystalline/molecular structure to explain the macroscopic properties of various categories of structural materials, i.e. metals, ionic (ceramics), and polymers. [Clarification Statement: Emphasis is on the attractive and repulsive forces that determine the functioning of the material. Examples could include why electrically conductive materials are often made of metal, flexible but durable materials are made up of long chained molecules, and pharmaceuticals are designed to interact with specific receptors.] 9-12-PS1-5 Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy. [Clarification Statement: Emphasis is on the idea that a chemical reaction is a system that affects the energy change. Examples of models could include molecular-level drawings and diagrams of reactions, graphs showing the relative energies of reactants and products, and representations showing energy is conserved.]

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B **Chemical reactions**	6-8-PS1-5 Develop and use a model to describe how the total number of atoms remains the same during a chemical reaction and thus mass is conserved. [Clarification Statement: Emphasis is on law of conservation of matter and on physical models or drawings, including digital forms that represent atoms.] 6-8-PS1-6 Construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes. [Clarification Statement: Emphasis is on the design, controlling the transfer of energy to the environment, and modification of a device using factors such as type and concentration of a substance. Examples of designs could involve chemical reactions such as dissolving ammonium chloride or calcium chloride.]	9-12-PS1-6 Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs. [Clarification Statement: Emphasis is on student reasoning that focuses on the number and energy of collisions between molecules.] 9-12-PS1-7 Refine the design of a chemical system by specifying a change in conditions that would alter the amount of products at equilibrium. [Clarification Statement: Emphasis is on the application of Le Chatelier's Principle and on refining designs of chemical reaction systems, including descriptions of the connection between changes made at the macroscopic level and what happens at the molecular level. Examples of designs could include different ways to increase product formation including adding reactants or removing products.] 9-12-PS1-8 Use symbolic representations and mathematical calculations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction. [Clarification Statement: Emphasis is on conservation of matter and mass through balanced chemical equations, use of the mole concept and proportional relationships.]
C **Nuclear Process**		9-12-PS1 -9 Use symbolic representations to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. [Clarification Statement: Emphasis is on simple qualitative models, such as pictures or diagrams, and on the scale of energy released in nuclear processes relative to other kinds of transformations.]

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PS2 - Motion and Stability: Forces and Interactions		
Concept	**Middle School**	**High School**
A **Forces and Motion**	6-8-PS2-1 Apply physics principles to design a solution that minimizes the force of an object during a collision and develop an evaluation of the solution. 6-8-PS2-2 Plan and conduct an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. [Clarification Statement: Emphasis is on balanced (Newton's First Law) and unbalanced forces in a system, qualitative comparisons of forces, mass and changes in motion (Newton's Second Law), frame of reference, and specification of units.]	9-12-PS2 -1 Analyze data to support and verify the concepts expressed by Newton's 2nd law of motion, as it describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration. [Clarification Statement: Examples of data could include tables or graphs of position or velocity as a function of time for objects subject to a net unbalanced force, such as a falling object, an object rolling down a ramp, or a moving object being pulled by a constant force.] 9-12-PS2-2 Use mathematical representations to support and verify the concepts that the total momentum of a system of objects is conserved when there is no net force on the system. [Clarification Statement: Emphasis is on the quantitative conservation of momentum in interactions and the qualitative meaning of this principle.] 9-12-PS2-3 Apply scientific principles of motion and momentum to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision. [Clarification Statement: Examples of evaluation and refinement could include determining the success of the device at protecting an object from damage and modifying the design to improve it. Examples of a device could include a football helmet or a parachute.]

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B **Types of Interaction**	6-8-PS2-3 Analyze diagrams and collect data to determine the factors that affect the strength of electric and magnetic forces. [Clarification Statement: Examples of devices that use electric and magnetic forces could include electromagnets, electric motors, or generators. Examples of data could include the effect of the number of turns of wire on the strength of an electromagnet, or the effect of increasing the number or strength of magnets on the speed of an electric motor.] 6-8-PS2-4 Create and analyze a graph to use as evidence to support the claim that gravitational interactions depend on the mass of interacting objects. [Clarification Statement: Examples of evidence for arguments could include data generated from simulations or digital tools; and charts displaying mass, strength of interaction, distance from the Sun, and orbital periods of objects within the solar system.] 6-8-PS2-5 Conduct an investigation and evaluate the experimental design to provide evidence that electric and magnetic fields exist between objects exerting forces on each other even though the objects are not in contact. . [Clarification Statement: Examples of this phenomenon could include the interactions of magnets, electrically-charged strips of tape, and electrically-charged pith balls. Examples of investigations could include first-hand experiences or simulations.]	9-12-PS2 -4 Use mathematical representations of Newton's Law of Gravitation to describe and predict the gravitational forces between objects. [Clarification Statement: Emphasis is on both quantitative and conceptual descriptions of gravitational fields.] 9-12-PS2-5 Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.

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PS3 - Energy		
Concept	**Middle School**	**High School**
A **Definitions of Energy**	6-8-PS3-1 Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass of an object and to the speed of an object. [Clarification Statement: Emphasis is on descriptive relationships between kinetic energy and mass separately from kinetic energy and speed. Examples could include riding a bicycle at different speeds, rolling different sizes of rocks downhill, and getting hit by a whiffle ball versus a tennis ball.] 6-8-PS3 -2 Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system. [Clarification Statement: Emphasis is on relative amounts of potential energy, not on calculations of potential energy. Examples of objects within systems interacting at varying distances could include: the Earth and either a roller coaster cart at varying positions on a hill or objects at varying heights on shelves, changing the direction/orientation of a magnet, and a balloon with static electrical charge being brought closer to a classmate's hair. Examples of models could include representations, diagrams, pictures, and written descriptions of systems.] 6-8-PS3-3 Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer. [Clarification Statement: Examples of devices could include an insulated box, a solar cooker, and a Styrofoam cup.] 6-8-PS3-4 Plan and conduct an investigation to determine the relationships among the energy transferred, the type of matter, the mass, and the change in the temperature of the sample. [Clarification Statement: Examples of experiments could include comparing final water temperatures after different masses of ice melted in the same volume of water with the same initial temperature, the temperature change of samples of different materials with the same mass as they cool or heat in the environment, or the same material with different masses when a specific amount of energy is added.]	9-12-PS3- 1 Create a computational model to calculate the change in the energy of one component in a system when the changes in energy are known. [Clarification Statement: Emphasis is on explaining the meaning of mathematical expressions used in the model.] 9-12-PS3- 2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects). [Clarification Statement: Examples of phenomena at the macroscopic scale could include the conversion of kinetic energy to thermal energy, the energy stored due to position of an object above the earth, and the energy stored between two electrically-charged plates. Examples of models could include diagrams, drawings, descriptions, and computer simulations.] 9-12-PS3 -3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy. [Clarification Statement: Emphasis is on both qualitative and quantitative evaluations of devices. Examples of devices could include Rube Goldberg devices, wind turbines, solar cells, solar ovens, and generators. Examples of constraints could include use of renewable energy forms and efficiency.]

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B **Conservation of Energy and Energy Transfer**	6-8-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object. [Clarification Statement: Examples of empirical evidence used in arguments could include an inventory or other representation of the energy before and after the transfer in the form of temperature changes or motion of object.]	9-12-PS3 -4 Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics). [Clarification Statement: Emphasis is on analyzing data from student investigations and using mathematical thinking to describe the energy changes both quantitatively and conceptually. Examples of investigations could include mixing liquids at different initial temperatures or adding objects at different temperatures to water.]

C **Relationship Between Energy and Forces**		9-12-PS3 - 5 Develop and use a model of two objects interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction. . [Clarification Statement: Examples of models could include drawings, diagrams, and texts, such as drawings of what happens when two charges of opposite polarity are near each other.]
D **Energy in Chemical Process and Everyday Life**		

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PS4 - Waves and Their Applications in Technologies for Information Transfer		
Concept	**Middle School**	**High School**
A **Wave Properties**	6-8-PS4-1 Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave. [Clarification Statement: Emphasis is on describing waves with both qualitative and quantitative thinking.] 6-8-PS4 -2 Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials. [Clarification Statement: Emphasis is on both light and mechanical waves. Examples of models could include drawings, simulations, and written descriptions.]	9-12-PS4-1 Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media. [Clarification Statement: Examples of data could include electromagnetic radiation traveling in a vacuum and glass, sound waves traveling through air and water, and seismic waves traveling through the Earth.] 9-12-PS4-2 Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other. [Clarification Statement: Emphasis is on how the experimental evidence supports the claim and how a theory is generally modified in light of new evidence. Examples of a phenomenon could include resonance, interference, diffraction, and photoelectric effect.]
B **Electromagnetic Radiation**		9-12-PS4-3 Communicate technical information about how electromagnetic radiation interacts with matter. [Clarification Statement: Examples could include solar cells capturing light and converting it to electricity; medical imaging; and communications technology.] 9-12-PS4 -4 Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter. [Clarification Statement: Emphasis is on the idea that photons associated with different frequencies of light have different energies, and the damage to living tissue from electromagnetic radiation depends on the energy of the radiation. Examples of published materials could include trade books, magazines, web resources, videos, and other passages that may reflect bias.]

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LS1 - From Molecules to Organisms: Structure and Processes		
Concept	**Middle School**	**High School**
A **Structure and Function**	6-8-LS1-1 Provide evidence that organisms (unicellular and multicellular) are made of cells and that a single cell must carry out all of the basic functions of life. [Clarification Statement: Emphasis is on developing evidence that living things are made of cells, distinguishing between living and non-living things, and understanding that living things may be made of one cell or many and varied cells.] 6-8-LS1-2 Develop and use a model to describe the function of a cell as a whole and ways parts of the cells contribute to that function. [Clarification Statement: Emphasis is on the cell functioning as a whole system and the primary role of identified parts of the cell, specifically the nucleus, chloroplasts, mitochondria, cell membrane, and cell wall.] 6-8-LS1-3 Develop an argument supported by evidence for how multicellular organisms are organized by varying levels of complexity; cells, tissue, organs, organ systems. 6-8-LS1-4 Present evidence that body systems interact to carry out key body functions, including providing nutrients and oxygen to cells, removing carbon dioxide and waste from cells and the body, controlling body motion/activity and coordination, and protecting the body.	9-12-LS1 -1 Construct a model of how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. [Clarification Statement: Genes are the regions in DNA that code for proteins. Basic transcription and translation explain the roles of DNA and RNA in coding the instructions for making polypeptides.] 9-12-LS1 -2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms. [Clarification Statement: Emphasis is on functions at the organism system level such as nutrient uptake, water delivery, and organism movement in response to stimuli.] 9-12-LS1 - 3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis. [Clarification Statement: Examples of investigations could include heart rate response to exercise, stomata response to moisture and temperature, and root development in response to water levels.]

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B **Growth and Development of Organisms**	6-8-LS1-5 Construct an explanation for how characteristic animal behaviors as well as specialized plant structures affect the probability of successful reproduction of animals and plants respectively. [Clarification Statement: Examples of animal behaviors that affect the probability of animal reproduction could include nest building to protect young from cold, herding of animals to protect young from predators, and vocalization of animals and colorful plumage to attract mates for breeding. Examples of animal behaviors that affect the probability of plant reproduction could include transferring pollen or seeds; and, creating conditions for seed germination and growth. Examples of plant structures that affect the probability of plant reproduction could include bright flowers attracting butterflies that transfer pollen, flower nectar and odors that attract insects that transfer pollen, and hard shells on nuts that squirrels bury.] 6-8-LS1-6 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms. [Clarification Statement: Examples of local environmental conditions could include availability of food, light, space, and water. Examples of genetic factors could include large breed cattle and species of grass affecting growth of organisms. Examples of evidence could include drought decreasing plant growth, fertilizer increasing plant growth, different varieties of plant seeds growing at different rates in different conditions, and fish growing larger in large ponds than they do in small ponds.]	9-12-LS1 - 4 Develop and use models to communicate the role of mitosis, cellular division, and differentiation in producing and maintaining complex organisms. [Clarification Statement: Major events of the cell cycle include cell growth, DNA replication, preparation for division, separation of chromosomes, and separation of cell contents.]

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C **Organization for Matter and Energy Flow in Organisms**	6-8-LS1 - 7 Construct a scientific explanation based on evidence for the role of photosynthesis and cellular respiration in the cycling of matter and flow of energy into and out of organisms.	9-12-LS1-6 Use a model to demonstrate how photosynthesis transforms light energy into stored chemical energy. [Clarification Statement: Emphasis is on illustrating inputs and outputs of matter and the transfer and transformation of energy in photosynthesis by plants and other photosynthesizing organisms. Examples of models could include diagrams, chemical equations, and conceptual models.] 9-12-LS1 - 7 Use a model to demonstrate that cellular respiration is a chemical process whereby the bonds of molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy. [Clarification Statement: Emphasis is on the conceptual understanding of the inputs and outputs of the process of cellular respiration.] 9-12-LS1 -8 Construct and revise an explanation based on evidence that organic macromolecules are primarily composed of six elements, where carbon, hydrogen, and oxygen atoms may combine with nitrogen, sulfur, and phosphorus to form large carbon-based molecules. [Clarification Statement: Large carbon-based molecules included are proteins, carbohydrates, nucleic acids, and lipids.]
D **Information Processing**		

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LS2 - Ecosystems: Interactions, Energy, and Dynamics		
Concept	**Middle School**	**High School**
A **Interdependent Relationships in Ecosystems**	6-8-LS2-1 Analyze and interpret data to provide evidence for the effects of resource availability on individual organisms and populations of organisms in an ecosystem. [Clarification Statement: Emphasis is on cause and effect relationships between resources and growth of individual organisms and the numbers of organisms in ecosystems during periods of abundant and scarce resources.]. 6-8-LS2-2 Construct an explanation that predicts the patterns of interactions among and between the biotic and abiotic factors in a given ecosystem. [Clarification Statement: Relationships may include competition, predation, and symbiosis.]	9-12-LS2 -1 Explain how various biotic and abiotic factors affect the carrying capacity and biodiversity of an ecosystem using mathematical and/or computational representations. [Clarification Statement: Examples of biotic factors could include relationships among individuals (e.g., feeding relationships, symbioses, competition) and disease. Examples of abiotic factors could include climate and weather conditions, natural disasters, and availability of resources. Genetic diversity includes within a population and species within an ecosystem. Examples of mathematical comparisons could include graphs, charts, histograms, and population changes gathered from simulations or historical data sets.]
B **Cycles of matter and Energy Transfer in Ecosystems**	6-8-LS2 -3 Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem. [Clarification Statement: Emphasis is on describing the conservation of matter and flow of energy into and out of various ecosystems, including food chains and food webs.]	9-12-LS2 -2 Construct and revise an explanation based on evidence that the processes of photosynthesis, chemosynthesis, and aerobic and anaerobic respiration are responsible for the cycling of matter and flow of energy through ecosystems and that environmental conditions restrict which reactions can occur. [Clarification Statement: Examples of environmental conditions can include the availability of sunlight or oxygen.] 9-12-LS2 - 3 Communicate the pattern of the cycling of matter and the flow of energy among trophic levels in an ecosystem. [Clarification Statement: Emphasis is on using a model of stored energy in biomass to describe the transfer of energy from one tropic level to another. Emphasis is on atoms and molecules as they move through an ecosystem.] 9-12-LS2 - 4 Use a model that illustrates the roles of photosynthesis, cellular respiration, decomposition, and combustion to explain the cycling of carbon in its various forms among the biosphere, atmosphere, hydrosphere, and geosphere. [Clarification Statement: The primary forms of carbon include carbon dioxide, hydrocarbons, waste, and biomass. Examples of models could include simulations and mathematical and conceptual models.]

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C **Ecosyste6-8 Dynamics, Functioning and Resilience**	M-LS2-4 Construct an argument supported by empirical evidence that explains how changes to physical or biological components of an ecosystem affect populations. [Clarification Statement: Emphasis is on recognizing patterns in data and making inferences about changes in populations, defining the boundaries of the system, and on evaluating empirical evidence supporting arguments about changes to ecosystems.] M-LS2-5. Evaluate benefits and limitations of differing design solutions for maintaining an ecosystem. [Clarification Statement: Examples of design solutions could include water, land, and species protection, and the prevention of soil erosion. Examples of design solution constraints could include scientific, economic, and social considerations.]	9-12-LS2 - 5 Evaluate the claims, evidence, and reasoning that the interactions in ecosystems maintain relatively consistent populations of species while conditions remain stable, but changing conditions may result in new ecosystem dynamics. [Clarification Statement: Examples of changes in ecosystem conditions could include modest biological or physical changes, such as moderate hunting or a seasonal flood; and extreme changes, such as volcanic eruption or sea level rise.] 9-12-LS2 - 6 Design, evaluate, and/or refine solutions that positively impact the environment and biodiversity. [Clarification Statement: Examples of solutions may include captive breeding programs, habitat restoration, pollution mitigation, energy conservation, agriculture and mining programs, and ecotourism.]
D **Social Interactions and Group Behavior**		

LS3 - Heredity: Inheritance and Variation of Traits		
Concept	**Middle School**	**High School**
A		9-12-LS 3-1 Develop and use models to clarify relationships about how

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Inheritance of Traits		DNA in the form of chromosomes is passed from parents to offspring through the processes of meiosis and fertilization in sexual reproduction.
B		9-12-LS 3-2 Compare and contrast asexual and sexual reproduction with regard to genetic information and variation in offspring 9-12-LS3-3 Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. [Clarification Statement: Emphasis is on conceptual understanding that changes in genetic material may result in making different proteins.] 9-12-LS3- 4 Make and defend a claim that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) mutations occurring during replication, and/or (3) mutations caused by environmental factors. [Clarification Statement: Emphasis is on using data to support arguments for the way variation occurs.] 9-12-LS3 -5 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population. [Clarification Statement: Emphasis is on the use of mathematics (Punnett Squares) to describe the probability of traits as it relates to genetic and environmental factors in the expression of traits.]
Variation of Traits		

LS4 - Biological Evolution; Unity and Diversity		
Concept	**Middle School**	**High School**
A	6-8-LS4 -1 Analyze and interpret evidence from the fossil record to infer	9-12-LS4 - 1 Communicate scientific information that common ancestry

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Evidence of Common Ancestry and Diversity	patterns of environmental change resulting in extinction and changes to life forms throughout the history of the Earth. [Clarification Statement: Examples of evidence include sets of fossils that indicate an environment, anatomical structures that indicate the function of an organism in the environment, and fossilized tracks that indicate behavior of organisms.]	and biological evolution are supported by multiple lines of empirical evidence. (Clarification statement: Emphasis is on a conceptual understanding of the role each line of evidence has relating to common ancestry and biological evolution. Examples of evidence could include similarities in DNA sequences, anatomical structures, and order of appearance of structures in embryological development. Communicate could mean written report, oral discussion, etc.) 9-12-LS4 - 2 Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy. [Clarification Statement: Emphasis is on inferring general patterns of relatedness among embryos of different organisms by comparing the macroscopic appearance of diagrams or pictures.]
B	6-8-LS4 -2 Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment. [Clarification Statement: Emphasis is on using simple probability statements and proportional reasoning to construct explanations.] 6-8-LS4 -3 Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms. [Clarification Statement: Emphasis is on synthesizing information from reliable sources about the influence of humans on genetic outcomes in artificial selection (such as genetic modification, animal husbandry, and farming practices).]	9-12-LS4- 3 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment. (Clarification Statement: Emphasis is on using evidence to explain the influence each of the four factors has on number of organisms, behaviors, morphology, or physiology in terms of ability to compete for limited resources and subsequent survival of individuals and adaptation of species. Examples of evidence could include mathematical models such as simple distribution graphs and proportional reasoning.) 9-12-LS4-4. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait. [Clarification Statement: Emphasis is on analyzing shifts in numerical distribution of traits and using these shifts as evidence to support explanations.]

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Natural Selection		

C	6-8-LS4 - 4 Interpret graphical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.	9-12-LS4 - 5 Construct an explanation based on evidence for how natural selection leads to adaptation of populations. [Clarification Statement: Emphasis is on using data to provide evidence for how specific biotic and abiotic differences in ecosystems (such as ranges of seasonal temperature, long-term climate change, acidity, light, geographic barriers, or evolution of other organisms) contribute to a change in gene frequency over time, leading to adaptation of populations.] 9-12-LS4-6 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species. [Clarification statement: Emphasis is on determining cause and effect relationships for how changes to the environment such as deforestation, fishing, and application of fertilizers, droughts, flood, and the rate of change of the environment affect distribution or disappearance of traits in species.] 9-12-LS4 - 7 Create or revise a model to test a solution to mitigate adverse impacts of human activity on biodiversity. [Clarification Statement: Emphasis is on designing solutions for a proposed problem related to threatened or endangered species, or to genetic variation of organisms for multiple species.]
Adaptation		

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Biodiversity and Humans		

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ESS1 - Earth's Place in the Universe		
Concept	**Middle School**	**High School**
A **The Universe and its Stars**	6-8-ESS1-1 Develop and use a model of the Earth-sun-moon system to explain the cyclic patterns of lunar phases and eclipses of the sun and moon. [Clarification Statement: Examples of models can be physical, graphical, or conceptual and should emphasize relative positions and distances.] 6-8-ESS1-2 Develop and use a model of the Earth-sun system to explain the cyclical pattern of seasons, which includes the Earth's tilt and directional angle of sunlight on different areas of Earth across the year. [Clarification Statement: Examples of models can be physical, graphical, or conceptual.] 6-8-ESS1-3 Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. [Clarification Statement: Emphasis for the model is on gravity as the force that holds together the solar system and Milky Way galaxy and controls orbital motions within them. Examples of models can be physical or conceptual.]	9-12-ESS1-1 Develop a model based on evidence to illustrate the life span of the Sun and the role of nuclear fusion in the Sun's core to release energy in the form of radiation. [Clarification Statement: Emphasis is on the energy transfer mechanisms that allow energy from nuclear fusion in the Sun's core to reach Earth. Examples of evidence for the model include observations of the masses and lifetimes of other stars, as well as the ways that the Sun's radiation varies due to sudden solar flares ("space weather").] 9-12-ESS1-2 Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe. [Clarification Statement: Emphasis is on the astronomical evidence of the red shift of light from galaxies as an indication that the universe is currently expanding, the cosmic microwave background as the remnant radiation from the Big Bang, and the observed composition of ordinary matter of the universe, primarily found in stars and interstellar gases (from the spectra of electromagnetic radiation from stars), which matches that predicted by the Big Bang theory (3/4 hydrogen and 1/4 helium).] 9-12-ESS1-3 Communicate scientific ideas about the way stars, over their life cycle, produce elements. [Clarification Statement: Emphasis is on the way nucleosynthesis, and therefore the different elements created, varies as a function of the mass of a star and the stage of its lifetime.]
B **Earth and the Solar System**	6-8-ESS1-4 Analyze and interpret data to determine scale properties of objects in the solar system. [Clarification Statement: Examples of scale properties include the sizes of an object's layers (such as crust and atmosphere), surface features (such as volcanoes), and orbital radius. Examples of data include statistical information, drawings and photographs, and models.]	9-12-ESS1.4 Use Kepler's Law to predict the motion of orbiting objects in the solar system. [Clarification Statement: Emphasis is on Newtonian gravitational laws governing orbital motions, which apply to human-made satellites as well as planets and moons.]

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C	6-8-ESS1-5 Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's history. [Clarification Statement: Emphasis is on how analyses of rock formations and the fossils they contain are used to establish relative ages of major events in Earth's history. Examples of Earth's major events could range from being very recent (such as the last Ice Age or the earliest fossils of homo sapiens) to very old (such as the formation of Earth or the earliest evidence of life). Examples can include the formation of mountain chains and ocean basins, the evolution or extinction of particular living organisms, or significant volcanic eruptions.]	9-12-ESS1-5 Evaluate evidence of the past and current movements of continental and oceanic crust, the theory of plate tectonics, and relative densities of oceanic and continental rocks to explain why continental rocks are generally much older than rocks of the ocean floor. [Clarification Statement: Examples include the ages of oceanic crust increasing with distance from mid-ocean ridges (a result of plate spreading) and the ages of North American continental crust increasing with distance away from a central ancient core (a result of past plate interactions).] 9-12-ESS1-6 Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history. [Clarification Statement: Emphasis is on using available evidence within the solar system to reconstruct the early history of Earth, which formed along with the rest of the solar system 4.6 billion years ago. Examples of evidence include the absolute ages of ancient materials (obtained by radiometric dating of meteorites, moon rocks, and Earth's oldest minerals), the sizes and compositions of solar system objects, and the impact cratering record of planetary surfaces.]
The History of Planet Earth		

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ESS2 - Earth's Systems		
Concept	**Middle School**	**High School**
A **Earth Materials and Systems**	6-8-EE2-1 Develop and use a model to illustrate that energy from the Earth's interior drives convection which cycles Earth's crust leading to melting, crystallization, weathering and deformation of large rock formations, including generation of ocean sea floor at ridges, submergence of ocean sea floor at trenches, mountain building and active volcanic chains. [Clarification Statement: The emphasis is on large-scale cycling resulting from plate tectonics that includes changes in rock types through erosion, heat and pressure.] 6-8-ESS2-2 Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales. [Clarification Statement: Emphasis is on how processes change Earth's surface at time and spatial scales that can be large (such as slow plate motions or the uplift of large mountain ranges) or small (such as rapid landslides or microscopic geochemical reactions), and how many geoscience processes (such as earthquakes, volcanoes, and meteor impacts) usually behave gradually but are punctuated by catastrophic events. Examples of geoscience processes include surface weathering and deposition by the movements of water, ice, and wind. Emphasis is on geoscience processes that shape local geographic features, where appropriate.]	9-12-ESS2-1 Develop a model to illustrate how Earth's interior and surface processes (constructive and destructive) operate at different spatial and temporal scales to form continental and ocean-floor features. [Clarification Statement: Emphasis is on how the appearance of land features (such as mountains, valleys, and plateaus) and sea-floor features (such as trenches, ridges, and seamounts) are a result of both constructive forces (such as volcanism, tectonic uplift, and orogeny) and destructive mechanisms (such as weathering, mass wasting, and coastal erosion).] 9-12-ESS2-2 Analyze geoscientific data to make the claim that one change to Earth's surface can create changes to other Earth systems. 9-12-ESS2-3 Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection. [Clarification Statement: Emphasis is on both a one-dimensional model of Earth, with radial layers determined by density, and a three-dimensional model, which is controlled by mantle convection and the resulting plate tectonics. Examples of evidence include maps of Earth's three-dimensional structure obtained from seismic waves, records of the rate of change of Earth's magnetic field (as constraints on convection in the outer core), and identification of the composition of Earth's layers from high-pressure laboratory experiments. 9-12-ESS2-4 Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
B **Plate Tectonics and Large-Scale Systems**	6-8-ESS2-3 Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions. [Clarification Statement: Examples of data include similarities of rock and fossil types on different continents, the shapes of the continents (including continental shelves), and the locations of ocean structures (such as ridges, fracture zones, and trenches).]	[

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C **The Role of Water in Earth's Surface Processes**	6-8-ESS2-4 Design and develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. [Clarification Statement: Emphasis is on the ways water changes its state as it moves through the multiple pathways of the hydrologic cycle. Examples of models can be conceptual or physical.] 6-8-ESS2-5 Research, collect, and analyze data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. [Clarification Statement: Emphasis is on how air masses flow from regions of high pressure to low pressure, causing weather (defined by temperature, pressure, humidity, precipitation, and wind) at a fixed location to change over time, and how sudden changes in weather can result when different air masses collide. Emphasis is on how weather can be predicted within possible ranges. Examples of data can be provided to students (such as weather maps, diagrams, and visualizations) or obtained through laboratory experiments (such as with condensation).] 6-8-ESS2-6 Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. [Clarification Statement: Emphasis is on how patterns vary by latitude, altitude, and geographic land distribution. Emphasis of atmospheric circulation is on the sunlight-driven latitudinal banding, the Coriolis effect, and resulting prevailing winds; emphasis of ocean circulation is on the transfer of heat by the global ocean convection cycle, which is constrained by the Coriolis effect and the outlines of continents. Examples of models can be diagrams, maps and globes, or digital representations.]	9-12-ESS2-5 Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes. Clarification Statement: Emphasis is on mechanical and chemical investigations with water and a variety of solid materials to provide the evidence for connections between the hydrologic cycle and system interactions commonly known as the rock cycle. Examples of mechanical investigations include stream transportation and deposition using a stream table, erosion using variations in soil moisture content, or ice wedging by the expansion of water as it freezes. Examples of chemical investigations include chemical weathering and recrystallization (by testing the solubility of different materials) or melt generation (by examining how water lowers the melting temperature of most solids).]

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D		
Weather and Climate		9-12-ESS2-6 Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere. [Clarification Statement: Emphasis is on modeling biogeochemical cycles that include the cycling of carbon through the ocean, atmosphere, soil, and biosphere (including humans), providing the foundation for living organisms.]

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Biogeology		9-12-ESS2-7 Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth. [Clarification Statement: Emphasis is on the dynamic causes, effects, and feedbacks between the biosphere and Earth's other systems, whereby geoscience factors control the evolution of life, which in turn continuously alters Earth's surface. Examples of coevolution include how photosynthetic life altered the atmosphere through the production of oxygen, which in turn increased weathering rates and allowed for the evolution of animal life; how microbial life on land increased the formation of soil, which in turn allowed for the evolution of land plants; or how the evolution of corals created reefs that altered patterns of erosion and deposition along coastlines and provided habitats for new life.]

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ESS3 - Earth and Human Activity		
Concept	**Middle School**	**High School**
A **Natural Resources**	6-8-ESS3-1 Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes and human activity. [Clarification Statement: Emphasis is on how these resources are limited and typically non-renewable, and how their distributions are significantly changing as a result of removal by humans. Examples of uneven distributions of resources as a result of past processes include but are not limited to petroleum (locations of the burial of organic marine sediments and subsequent geologic traps), metal ores (locations of past volcanic and hydrothermal activity associated with subduction zones), and soil (locations of active weathering and/or deposition of rock).]	9-12-ESS3-1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity. [Clarification Statement: Examples of key natural resources include access to fresh water, regions of fertile soils such as river deltas, and high concentrations of minerals and fossil fuels. Examples of natural hazards can be from interior processes (such as volcanic eruptions and earthquakes), surface processes (such as tsunamis, mass wasting and soil erosion), and severe weather. Examples of the results of changes in climate that can affect populations or drive mass migrations include changes to sea level, regional patterns of temperature and precipitation, and the types of crops and livestock that can be raised.] 9-12-ESS3-2 Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on economic, social, and environmental cost-benefit ratios. [Clarification Statement: Emphasis is on the conservation, recycling, and reuse of resources (such as minerals and metals) where possible, and on minimizing impacts where it is not. Examples include developing best practices for agricultural soil use, mining (for coal, tar sands, and oil shale), and pumping (for petroleum and natural gas). Science knowledge indicates what can happen in natural systems—not what should happen.]

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B **Natural Hazards**	6-8-ESS3-2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects. [Clarification Statement: Emphasis is on how some natural hazards, such as volcanic eruptions and severe weather, are preceded by phenomena that allow for reliable predictions, but others, such as earthquakes, occur suddenly and with no notice, and thus are not yet predictable. Examples of natural hazards can be taken from interior processes (such as earthquakes and volcanic eruptions), surface processes (such as mass wasting and tsunamis), or severe weather events (such as hurricanes, tornadoes, and floods). Examples of data can include the locations, magnitudes, and frequencies of the natural hazards. Examples of technologies can be global (such as satellite systems to monitor hurricanes or forest fires) or local (such as building basements in tornado-prone regions or reservoirs to mitigate droughts).]	
C **Human Impacts on Earth's Systems**	6-8-ESS3-3 Analyze data to define the relationship for how increases in human population and per-capita consumption of natural resources impact Earth's systems. [Clarification Statement: Examples of data include grade-appropriate databases on human populations and the rates of consumption of food and natural resources (such as freshwater, mineral, and energy). Examples of impacts can include changes to the appearance, composition, and structure of Earth's systems as well as the rates at which they change.] 6-8-ESS3-4 Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment. [Clarification Statement: Examples of the design process include examining human environmental impacts, assessing the kinds of solutions that are feasible, and designing and evaluating solutions that could reduce that impact. Examples of human impacts can include water usage (such as the withdrawal of water from streams and aquifers or the construction of dams and levees), land usage (such as urban development, agriculture, or the removal of wetlands), and pollution (such as of the air, water, or land).]	9-12-ESS3-3 Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity. [Clarification Statement: Examples of factors that affect the management of natural resources include costs of resource extraction and waste management, per-capita consumption, and the development of new technologies. Examples of factors that affect human sustainability include agricultural efficiency, levels of conservation, and urban planning.] 9-12-ESS3-4 Evaluate or refine a technological solution that reduces impacts of human activities on natural systems in order to restore stability and or biodiversity of the ecosystem as well as prevent their reoccurrences. [Clarification Statement: Examples of human activities could include forest fires, acid rain, flooding, urban development, pollution, deforestation, and introduction of an invasive species.]

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D Global Climate Change	6-8-ESS3-5 Analyze evidence of the factors that have caused the change in global temperatures over the past century. [Clarification Statement: Examples of factors include human activities (such as fossil fuel combustion, cement production, and agricultural activity) and natural processes (such as changes in incoming solar radiation or volcanic activity). Examples of evidence can include tables, graphs, and maps of global and regional temperatures, atmospheric levels of gases such as carbon dioxide and methane, and the rates of human activities.]	9-12-ESS3-5 Analyze geoscientific data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems. [Clarification Statement: Examples of evidence, for both data and climate model outputs, are for climate changes (such as precipitation and temperature) and their associated impacts (such as on sea level, glacial ice volumes, or atmosphere and ocean composition).] 9-12-ESS3-6 Predict how human activity affects the relationships between Earth systems in both positive and negative ways. [Clarification Statement: Examples of Earth systems to be considered are the hydrosphere, atmosphere, cryosphere, geosphere, and/or biosphere.]

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ETS1 - Engineering Design		
Concept	**Middle School**	**High School**
A **Defining and Delimiting Engineering Problems**	6-8-ETS-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions**.**	9-12-ETS-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants. 9-12-ETS-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
B **Developing Possible Solutions**	6-8-ETS-2 Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem. 6-8-ETS-3 Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success. 6-8-ESTS-4 Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.	9-12-ETS3-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts. 9-12-ETS-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.
C **Optimizing the Solution Process**		

K-5 Social Studies
Missouri Learning Standards: Grade Level Expectations

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Missouri Department of Elementary and Secondary Education
Spring 2016

1. Knowledge of the principles expressed in documents shaping constitutional democracy in the United States						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
A. Purposes and principles of the Declaration of Independence					With assistance, read and analyze the text of the Declaration of Independence to determine important principles that it contains including inalienable rights, government by the consent of the governed and the redress of grievances.	Apply the principles of the Declaration of Independence to the historical time periods being studied and to current events.
B. Purposes and principles of the Constitution	Identify reasons for making rules within the school.	Identify and explain why cities make laws.	Explain and give examples of how laws and rules are made and changed within a community.	Explain and give examples of how laws are made and changed within the state. Explain the major purposes of the Missouri Constitution.	Explain the major purposes of the U.S. Constitution. With assistance, research and analyze the text of the U.S. Constitution to determine important principles such as limited government, rule of law, majority rules, minority rights, separation of powers, checks and balances and popular sovereignty.	Apply the principles of the U.S. Constitution to the historical time periods being studied and to current events.
C. Purposes and principles of the Bill of Rights	Discuss the concept of individual rights.	Discuss how individual rights are protected.	Examine how individual rights are protected within a community.	Examine how individual rights are protected within our state.	Explain the major purpose of the Bill of Rights. Identify important principles in the Bill of Rights.	Apply the principles of the Bill of Rights to historical time periods being studied and to current events.

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1. Knowledge of the principles expressed in documents shaping constitutional democracy in the United States (con't)						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
D. Role of citizens and governments in carrying out constitutional principles		Give examples of being an active and informed citizen in your classroom or community.	Analyze how being an active and informed citizen makes a difference in your community. List the consequences of citizens not actively participating in their communities.	Explain how the State of Missouri relies on responsible citizen participation and draw implications for how people should participate.	Examine ways by which citizens have effectively voiced opinions, monitored government, and brought about change both past and present.	Analyze ways by which citizens have effectively voiced opinions, monitored government, and brought about change both past and present.
E. Character traits and civic attitudes of significant individuals	Describe the character traits of role models within your family or school.	Describe the character traits of role models within your community.	Describe the character traits and civic attitudes of inventors or pioneers in their field who influenced progress in the nation. See teacher resources for illustrative examples.	Describe the character traits and civic attitudes of influential Missourians. See teacher resources for illustrative examples.	Describe the character traits and civic attitudes of historically significant individuals in American history prior to c. 1800. See teacher resources for illustrative examples.	Describe the character traits and civic attitudes of historically significant individuals in the United States history from c. 1800 – 2000. See teacher resources for illustrative examples.
F. Knowledge of the symbols of our state and nation	Identify the flag as a symbol of our nation. Recite the Pledge of Allegiance.	Recognize and explain the significance of the Statue of Liberty, U.S. Capitol, Bald Eagle and the Liberty Bell. Recognize and explain the significance of symbols of your local community.	Describe the importance of the Pledge of Allegiance. Recognize and explain the significance of national symbols including national landmarks, national parks, and important memorials. See teacher resources for illustrative examples)	Explain how the National Anthem symbolizes our nation. Recognize and explain the significance of the Gateway Arch and the Great Seal of Missouri and other symbols of our state.	Recognize and explain the significance of national symbols associated with historical events and time periods being studied.	Recognize and explain the significance of national symbols associated with historical events and time periods being studied.

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2. Knowledge of principles and processes of governance systems						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
A. Purposes and roles of government				Explain how governments balance individual rights with common good to solve local community or state issues.	Explain how the purpose and roles of government were debated c. early settlements to 1800.	Explain how the purpose and roles of government have been debated across historical time periods to current times.
B. Dispute resolution				Analyze peaceful resolution of disputes by the courts, or other legitimate authorities in Missouri.	Analyze peaceful resolution of disputes by courts or other legitimate authorities in U.S. history from early settlement to c. 1800.	Analyze peaceful resolution of disputes by courts or other legitimate authorities in U.S. history from c. 1800 –2000.
C. Processes of governmental systems in decision making	Describe why groups need to make decisions and how those decisions are made in families and classrooms.	Describe how authoritative decisions are made, enforced and interpreted within schools and local communities.	Distinguish the responsibilities and powers of government officials at various levels and branches of government in authoritative decision making.	Describe how authoritative decisions are made, enforced and interpreted by the state government across historical time periods and/or in current events.	Explain how authoritative decisions are made, enforced and interpreted by the federal government across historical time periods and/or current events.	Analyze how authoritative decisions are made, enforced and interpreted by the federal government across historical time periods and current events.
D. Functions of governmental systems	Describe roles and responsibilities of people in authority in families and in groups.	Describe roles and responsibilities of people in government, such as a judge, mayor, police, city council member, in a community.	Identify and explain the concept of branches and functions of government.	Identify and explain the functions of the three branches of government in Missouri.	Identify and explain the functions of the three branches of government in the federal government.	Distinguish between powers and functions of local, state and national government in the past and present.

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3a. Knowledge of continuity and change in the history of Missouri and the United States						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
A. Understand the movement of people from many regions of the world to North America			Compare the culture and people in our community across multiple time periods.	Describe the migration of native Americans to Missouri prior to European settlement in the state. Describe the discovery, exploration and early settlement of Missouri by European immigrants. Describe the reasons African peoples were enslaved and brought to Missouri.	Describe the migrations of native Americans prior to 1800. Describe the discovery, exploration and early settlement of America by Europeans prior to 1800. Describe the reasons African peoples were enslaved and brought to the Americas prior to 1800.	Outline the territorial expansion of the United States. Describe the impact of migration on immigrants and the United States c. 1800-2000.
B. Historical perspective / Thinking / Passage of time	Create a personal history. Compare your family's life in the past and present.	Compare and contrast our community in the past and the present.	Compare and contrast the changing habitats, resources, art and daily lives of native American people in regions of the U.S.	Examine cultural interactions and conflicts among Native Americans, European immigrants and enslaved and free African-Americans in Missouri. Examine changing cultural interactions and conflicts among Missourians after the Civil War.	Examine cultural interactions and conflicts among Native Americans, Immigrants from Europe, and enslaved and free Africans and African Americans prior to c. 1800.	Examine cultural interactions and conflicts among Native Americans, European Americans and African Americans from c. 1800 – 2000.

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3a. Knowledge of continuity and change in the history of Missouri and the United States						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
C. Knowledge of the contributions of significant persons in U.S. history.	Describe the contributions of people typically studied in K-5 programs associated with national holidays. (See teacher resources for illustrative examples)	Describe the contributions of people typically studied in K-5 programs associated with national holidays. (See teacher resources for illustrative examples)	Describe the contributions of inventors or pioneers in their field who influenced progress in our nation. (See teacher resources for illustrative examples)	Identify and describe the historical significance of the individuals from Missouri who have made contributions to our state and nation. (See teacher resources for illustrative examples)	Identify and describe the contributions of historically significant individuals to America and the United States prior to c. 1800. (See teacher resources for illustrative examples)	Identify and describe the contributions of historically significant individuals to the United States from c. 1800 – 2000. (See teacher resources for illustrative examples)
D. Perspectives on the American Revolution					Explain the causes of the American Revolution, including the perspectives of patriots, loyalists, Native Americans, African Americans and European allies. Explain the factors that contributed to the colonists' success.	

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3a. Knowledge of continuity and change in the history of Missouri and the United States						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
E. Political developments and reform movements in the U.S.				Discuss the causes and consequences of the Dred Scott decision on Missouri and the nation.	Describe the historical context for the drafting of the Declaration of Independence, the Constitution and the Bill of Rights. Explain how the Declaration of Independence, the Constitution and the Bill of Rights affected people in the United States prior to c. 1800.	Explain the causes and consequences of major political developments and reform in U.S. history from c. 1800-2000
F Westward Expansion and settlement in the US				Describe the importance of the Louisiana Purchase and the expedition of Lewis and Clark. Evaluate the impact of westward expansion on the Native Americans in Missouri. Discuss issues of Missouri statehood. (See teacher resources for illustrative examples)	Investigate the causes and consequences of westward expansion prior to 1800.	Investigate the causes and consequences of westward expansion c. 1800-2000.

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3a. Knowledge of continuity and change in the history of Missouri and the United States						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
G. Understanding the causes and consequences of the Civil War				Explain Missouri's role in the Civil War, including the concept of a border state. Describe the consequences of the Civil War in Missouri including on education, transportation, and communication.		Identify political, economic and social causes and consequences of the Civil War and Reconstruction.
H. Major economic developments in the United States						Identify political, economic, and social causes and consequences of the Great Depression.
I. Causes, comparisons, and results of major twentieth-century wars						Identify political, economic, and social causes and consequences of World War I and WWII on the United States. Identify the political, economic and social consequences of the Cold War on the United States.

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4. Knowledge of economic concepts and principles						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
A. Knowledge of basic economic concepts	Describe examples of scarcity within your family and school. Describe examples of opportunity cost within your family and school. Describe examples of needs and wants within your family and school.	Describe examples of scarcity within your school and community. Describe examples of goods and services within your school and community. Describe consumers and producers and the relationship to goods and services within your school and community.	Describe consumption and production and the relationship to goods and services within your region. Demonstrate how people use money to buy and sell goods and services. Demonstrate how people barter to exchange goods and services. Explain the relationship of income, labor, and wages.	Compare and contrast private and public goods and services. Define natural, capital and human resources. Define economy. Explain supply and demand.	Compare and contrast saving and financial investment. Explain the relationship between profit and loss in economic decisions. Distinguish among natural, capital and human resources.	Explain how scarcity, supply and demand, opportunity costs, income, labor, wages and other economic concepts affect our nation's past, present and future.
B. Understanding the consequences of economic decisions			Describe a personal cost-benefit situation.	Conduct a personal cost-benefit analysis.	Conduct a public cost-benefit analysis.	
C. Understanding various types of taxes and their purposes				Define taxes and explain how taxes are generated and used.	Explain how the government utilizes taxes to provide goods and services.	

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D. **Factors that influence the economy**				Explain factors, past and present, that influence changes in our state's economy.	Explain factors, past and present, that influence changes in state and regional economies.	Explain factors, past and present, that influence changes in our nation's economy. Use an economic lens to describe the impact of migration on the immigrants and the United States c. 1800-2000

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5. Knowledge of major elements of geographical study and analysis and their relationship to changes in society and the environment						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
A. Reading and constructing maps	Identify maps as representations of real places. With assistance, read, construct, and use maps of familiar places such as the classroom, the home, the bedroom etc. Match legend symbols to map features.	Identify globes as representations of real places. With assistance, read, construct, and use maps which have a title and key. Describe how maps are created for different purposes such as a school fire drill, a trip to the zoo etc. Use a compass rose to identify cardinal directions on a map.	Read and construct maps with title and key. Identify the properties and use of different types of maps for a variety of purposes.	Read and construct historical and current maps.	Construct and interpret historical and current maps	Use geographic sources to acquire information, answer questions and solve problems. Construct maps for relevant social studies topics.
B. Understanding the concept of location to make predictions and solve problems.	Apply positional words to locations within the classroom	Locate a place by pointing it out on a map and by describing its relative location.	Name and locate the regions in your community. Name and locate regions of the world.	Name and locate major cities, rivers, regions, and states which border Missouri. Describe and use absolute location using a grid system.	Name and locate specific regions, states, capitals, river systems and mountain ranges in the United States based on historical or current topics.	Name and locate specific regions, states, capitals, river systems and mountain ranges in the United States based on historical or current topics. Locate and describe real places, using absolute and relative location.

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5. Knowledge of major elements of geographical study and analysis and their relationship to changes in society and the environment						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
C. Understanding the concept of place		Identify physical characteristics of your community. (See teacher resources for illustrative examples) Describe human characteristics of your community. (See teacher resources for illustrative examples)	Identify and describe physical characteristics of the world. (See teacher resources for illustrative examples) Identify and describe physical characteristics of the student's region in Missouri. (See teacher resources for illustrative examples) Describe human characteristics of the student's region in Missouri. (See teacher resources for illustrative examples)	Identify and compare physical geographic characteristics of Missouri. (See teacher resources for illustrative examples) Describe human geographic characteristics of Missouri. (See teacher resources for illustrative examples)	Identify and compare physical characteristics of specific regions within the nation. Identify and compare diverse human geographic characteristics of the nation.	Describe and analyze physical characteristics of the nation. Describe and analyze diverse human characteristics of the nation.
D. Relationships within places Human-Environment Interactions				Describe how people of Missouri are affected by, depend on, adapt to and change their physical environments in the past and in the present.	Analyze how people are affected by, depend on, adapt to and change their physical environments in the past and in the present.	Evaluate how people are affected by, depend on, adapt to and change their physical environments in the past and in the present.

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5. Knowledge of major elements of geographical study and analysis and their relationship to changes in society and the environment						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
E. Understanding relationships between and among places			Describe different types of communication and transportation and identify their advantages and disadvantages. Describe how transportation and communication systems have facilitated the movement of people, products, and ideas.	Describe how changes in communication and transportation technologies affect people's lives.	Analyze how changes in communication and transportation technologies affect people's lives.	Evaluate how changes in communication and transportation technologies affect people's lives.
F. Understanding relationships between and among regions			Define the concept of regions as places which have unifying political, physical, or cultural characteristics. Identify examples of different regions in Missouri. (See teacher resources for illustrative examples) Describe why people of different groups settle more in one place or region than another.	Identify regions in Missouri. Compare regions in Missouri. (See teacher resources for illustrative examples)	Identify different regions in the United States and analyze how their characteristics affect people who live there.	Describe different regions in the United States and analyze how their characteristics affect people who live there.

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5. Knowledge of major elements of geographical study and analysis and their relationship to changes in society and the environment						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
G. Using geography to interpret, explain and predict			Explain how geography affects the way people live today.	Explain how geography affected important events in Missouri history.	Use geography to interpret the past and predict future consequences as appropriate to topics or eras discussed.	Use geography to interpret the past, explain the present and plan for the future as appropriate to topics or eras discussed. Use a geographic lens to describe the impact of migration on the immigrants and the United States c. 1800-2000.

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6. Knowledge of relationships of the individual and groups to institutions and cultural traditions						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
A. Cultural characteristics of all people	Describe cultural characteristics of your family and class members including language, celebrations, customs, holidays, artistic expression, food, dress, and traditions.	Describe cultural characteristics of your school and community. (See teacher resources for illustrative examples)	Compare the cultural characteristics of regions in the state. (See teacher resources for illustrative examples)	Compare the cultural characteristics of regions in Missouri. (See teacher resources for illustrative examples)	Compare cultural characteristics across historical time periods in U.S. history prior to c. 1800. (See teacher resources for illustrative examples)	Compare cultural characteristics across historical time periods in the U.S. post c.1800 (See teacher resources for illustrative examples) Describe the cultural impact of migration on the immigrants and the United States c. 1800-2000.
B. Methods of resolving conflicts	Explain how to resolve disputes peacefully in the classroom and on the playground.	Propose peaceful resolutions of disputes in the classroom and on the playground.	Demonstrate a peaceful resolution to a dispute.	Take part in a constructive process or method for resolving conflicts.	Apply constructive processes or methods for resolving conflicts.	Evaluate constructive processes or methods for resolving conflicts.
C. Ideas and beliefs of different cultures	Share stories related to your family cultural traditions and family lore.	Recount stories about locations, people, and cultural events in your community.	Recall stories and songs that reflect the cultural history of peoples from various regions in the United States including regional folk figures, Native American legends and African American folktales.	Research stories and songs that reflect the cultural history of Missouri.	Research stories and songs that reflect the cultural history of the early United States prior to 1800.	Research stories and songs that reflect the cultural history of the United States c. 1800-2000.

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6. Knowledge of relationships of the individual and groups to institutions and cultural traditions						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
D. Cultural heritage and preservation	Describe how you and your family remember and commemorate your cultural heritage.	Describe how your community commemorates its cultural heritage.	Describe how regions commemorate cultural heritage.	Describe how people in Missouri preserve their cultural heritage.	Analyze the preservation of cultural life, celebrations, traditions, and commemorations over time.	Analyze the preservation of cultural life, celebrations, traditions, and commemorations over time.
E. Changing of roles of various groups				Examine the changing roles of Native Americans, Immigrants, African Americans, women and others in Missouri history.	Examine roles among Native Americans, Immigrants, African Americans, women and others from early migrations to c. 1800.	Examine the changing roles among Native Americans, Immigrants, African Americans, women and others from 1800-2000.

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7. Knowledge of the use of tools of social science inquiry						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
A. Identify, select, analyze, and evaluate resources to create a product of social science inquiry	Label and analyze different social studies' sources with guidance and support from an adult. Use artifacts to share information on social studies' topics. (See teacher resources for illustrative examples)	Identify and analyze primary and secondary social studies' sources in classroom discussion with guidance and support from an adult. Identify and use artifacts to share information on social studies' topics. (See teacher resources for illustrative examples)	Describe and analyze primary and secondary social studies' sources in classroom discussion with guidance and support. Select and use artifacts to share information on social studies' topics. (See teacher resources for illustrative examples)	Select and analyze primary and secondary social studies' sources to determine importance with guidance and support. Create and use artifacts to share information on social studies' topics. (See teacher resources for illustrative examples)	Select, analyze, and evaluate primary and secondary social studies' sources with guidance and support. Analyze and use artifacts to share information on social studies' topics. (See teacher resources for illustrative examples)	Identify, select, analyze, and evaluate resources to create a product of social science inquiry. Evaluate and use artifacts to share information on social studies' topics. (See teacher resources for illustrative examples)
B. Use visual tools to communicate information and ideas	Use visual tools to communicate information.	Create visual tools to communicate information.	Use visual tools and informational texts to communicate information.	With guidance and support, use visual tools and informational texts to interpret, draw conclusions, make predictions, and communicate information and ideas.	Use visual tools and informational texts to interpret, draw conclusions, make predictions, and communicate information and ideas with guidance and support, as needed. Create products such as maps, graphs, timelines, charts and models, diagrams etc. to communicate information and understanding.	Use visual tools to interpret, draw conclusions, make predictions, and communicate information and ideas. Create and present products such as maps, graphs, timelines, charts and models, diagrams etc. to communicate information and understanding on social studies' topics.

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7. Knowledge of the use of tools of social science inquiry						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
C. Understanding and supporting fact, opinion, bias and point of view in sources.			Explain the difference between fact and opinion in social studies' topics. Explain the concept of point of view in social studies' topics.	Identify facts and opinions in social studies' topics. Identify point of view in social studies' topics.	Distinguish between fact and opinion and recognize bias and point of view in social studies' topics.	Explain how facts and opinions affect point of view and/or bias in social studies' topics. Identify, research, and defend a point of view/position on a social studies' topic.
D. Conducting and presenting research with appropriate resources.	Share findings about a social studies' topic.	Share findings about a social studies' topic.	Share research about a social studies' topic.	Present social studies' research to an audience using appropriate sources.	With assistance, conduct and present social studies' research to an audience using appropriate sources.	Conduct and present social studies' research to an audience using appropriate sources.

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7. Knowledge of the use of tools of social science inquiry						
CONCEPTS	**GRADE K**	**GRADE 1**	**GRADE 2**	**GRADE 3**	**GRADE 4**	**GRADE 5**
E. Developing a research plan and identifying resources	Ask questions and find answers, with assistance.	Ask supporting questions and find answers about social studies' topics, with assistance.	Develop supporting questions about social studies' topics, with assistance. Describe a process to answer those questions Discuss types of sources that would be helpful in exploring social studies' questions.	Generate supporting questions about social studies' topics. Use steps in a process to investigate a social studies' question. Use appropriate sources to investigate social studies' questions.	Generate compelling research questions about a social studies' topic. Apply a research process to a compelling social studies' question. Identify and use appropriate resources for investigating a compelling social studies' question.	Generate compelling research questions about a social studies' topic. Create and apply a research process to investigate a compelling social studies' question. Evaluate and use appropriate resources for investigating a compelling social studies' question.
F. Conducting and presenting research with appropriate resources				Investigate an appropriate social studies' question and share results with assistance, if needed.	Research an appropriate social studies' question and share results with an audience.	Conduct and present research on a social studies' question to an audience, using appropriate sources.
G. Supporting a point of view						Research and defend a point of view/position on a social studies' question.

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6-12 Social Studies
Missouri Learning Standards: Grade Level Expectations

Missouri Department of Elementary and Secondary Education
Spring 2016

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1. History: Continuity and Change						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 1 **Tools of Social Science Inquiry**	A. Create and use tools to analyze a chronological sequence of related events in American history.	A. Create and use tools to analyze a chronological sequence of related events in United States history.	A. Create and use tools to analyze a chronological sequence of related events in world history.	A. Create and use tools to analyze a chronological sequence of related events in world history.	A. Create and use historical maps and timelines in order to represent continuity and change within and among regions over time.	A. Create and use tools to analyze a chronological sequence of events related to a study of government.
Theme 1 **Tools of Social Science Inquiry**	B. Explain connections between historical context and peoples' perspectives at the time in American history.	B. Explain connections between historical context and peoples' perspectives at the time in United States history.	B. Explain connections between historical context and peoples' perspectives at the time in world history	B. Explain connections between historical context and peoples' perspectives at the time in world history.	B. Evaluate historical solutions to problems within and among world regions in order to draw conclusions about current and future decisions.	B. Explain connections between historical context and peoples' perspectives about government at the time.
Theme 1 **Tools of Social Science Inquiry**	C. With assistance, develop a research plan, identify appropriate resources for investigating social studies topics and create a research product which applies an aspect of American history prior to c. 1870 to a contemporary issue.	C. Develop a research plan, identify appropriate resources for investigating social studies topics, and create and present a research product which applies an aspect of United States history post c. 1870 to a contemporary issue.	C. With assistance, develop a research plan, identify appropriate resources for investigating social studies topics and create a research product which applies an aspect of world history prior to c.1450 to a contemporary issue.	C. Develop a research plan, identify appropriate resources for investigating social studies topics, and create and present a research product which applies an aspect of world history post c. 1450 to a contemporary issue.	C. With assistance, develop a research plan, identify appropriate resources for investigating social studies topics and create a research product which applies an aspect of geography to a contemporary issue.	C. Develop a research plan, identify appropriate resources for investigating social studies topics, and create and present a research product which applies an aspect of government to a contemporary issue.

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1. History: Continuity and Change (cont'd)						
Theme 1	**6-8 American History**	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Tools of Social Science Inquiry	D. Using an inquiry lens, develop compelling questions about American history prior to 1870, to determine helpful resources and consider multiple points of views represented in the resources.	D. Using an inquiry lens, develop compelling questions about United States history post c. 1870 to determine helpful resources and consider multiple points of views represented in the resources.	D. Using an inquiry lens, develop compelling questions about world history prior to c. 1450, to determine helpful resources and consider multiple points of views represented in the resources.	D. Using an inquiry lens, develop compelling questions about world history post c. 1450, to determine helpful resources and consider multiple points of views represented in the resources.	D. Using an inquiry lens, develop compelling geographic questions, determine helpful resources and consider multiple points of views represented in the resources.	D. Using an inquiry lens, develop compelling questions about government, determine helpful resources and consider multiple points of views represented in the resources.
Theme 1	E. Analyze the causes and consequences of a specific problem in American history prior to c. 1870 as well as the challenges and opportunities faced by those trying to address the problem.	E. Analyze the causes and consequences of a specific problem in United States history post c. 1870 as well as the challenges and opportunities faced by those trying to address the problem.	E. Analyze the causes and consequences of a specific problem in world history prior to c. 1450 as well as the challenges and opportunities faced by those trying to address the problem.	E. Analyze the causes and consequences of a specific problem in world history post c. 1450 as well as the challenges and opportunities faced by those trying to address the problem.	E. Analyze the causes and consequences of a current geographic issue as well as the challenges and opportunities faced by those trying to address the problem.	E. Analyze the causes and consequences of a specific issue tied to government as well as the challenges and opportunities faced by those trying to address the problem.
Tools of Social Science Inquiry						

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2. Government Systems and Principals						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 1 Tools of Social Science Inquiry	A. Analyze laws, policies and processes to determine how governmental systems affect individuals and groups in society in American history prior to c.1870.	A. Analyze laws, policies, and processes to determine how governmental systems affect individuals and groups in society in United States history c.1870-2010.	A. Analyze laws, policies, and processes to determine how governmental systems affect individuals and groups in society in world history prior to c.1450.	A. Analyze laws, policies and processes to determine how governmental systems affect individuals and groups in society in world history post c.1450.	A. Using a geographic lens, analyze laws, policies and processes to determine how governmental systems affect individuals and groups in society.	A. Analyze laws, policies, and processes to determine how governmental systems affect individuals and groups in society.
Theme 1 Tools of Social Science Inquiry		B. Predict the consequences which can occur when individuals fail to carry out their personal responsibilities.		B. Predict the consequences which can occur when individuals fail to carry out their personal responsibilities.	B. Analyze current human environmental issues using relevant geographic sources to propose solutions.	B. Distinguish the powers and responsibilities of citizens and institutions to address and solve problems.
Theme 1 Tools of Social Science Inquiry		C. Predict the consequences which can occur when institutions fail to meet the needs of individuals and groups.		C. Predict the consequences which can occur when institutions fail to meet the needs of individuals and groups.		

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3. Geographic Study						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 1 **Tools of Social Science Inquiry**	A. Create and use maps and other graphic representations in order to explain relationships and reveal patterns or trends in American history prior to c.1870.	A. Create and use maps and other graphic representations in order to explain relationships and reveal patterns or trends in United States' history c.1870-2010.	A. Create and use maps and other graphic representations in order to explain relationships and reveal patterns or trends in world history prior to c.1450.	A. Create and use maps and other graphic representations in order to explain relationships and reveal patterns or trends in world history c.1450-2010.	A. Create and use maps, graphs, statistics, and geo-spatial technology in order to explain relationships and reveal spatial patterns or trends.	A. Create and use maps and other graphic representations in order to explain relationships and reveal patterns or trends about government.
Theme 1 **Tools of Social Science Inquiry**	B. Explain how the physical and human characteristics of regions in the Americas prior to c. 1870 are connected to changing identity and culture.	B. Analyze how the physical and human characteristics of regions in the United States post C. 1870 are connected to changing identity and culture.	B. Describe the impact of human settlement activities on the environmental and cultural characteristics of world regions prior to c. 1450.	B. Analyze how the physical and human characteristics of world regions post c. 1450 are connected to changing identity and culture.	B. Analyze how the physical and human characteristics of current world regions are connected to changing identity and culture.	B. Analyze the relationship between of the geography of the original 13 colonies on the formation of United States government.
Theme 1 **Tools of Social Science Inquiry**	C. Locate major cities of Missouri, the United States, and the world; states of the United States and key world nations; the world's continents, and oceans; and major topographical features of the United States.	C. Locate major cities of Missouri, the United States, and the world; states of the United States and key world nations; the world's continents, and oceans; and major topographical features of the United States.	C. Locate major cities of the world and key world nations; the world's continents, and oceans; and major topographical features of the world.	C. Locate major cities of the world and key world nations; the world's continents, and oceans; and major topographical features of the world.	C. Locate the states of the United States and corresponding regions.	

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3. Geographic Study (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 1 **Tools of Social Science Inquiry**					D. Locate cities of Missouri, the United States and the world.	
Theme 1 **Tools of Social Science Inquiry**					E. Locate the major nations of the world.	
Theme 1 **Tools of Social Science Inquiry**					F. Locate the major landforms of the world.	

4. Economic Concepts						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 1 **Tools of Social Science Inquiry**	A. Using an American history lens, examine the opportunity costs and benefits of economic decisions on society as a whole as well as on individuals, prior to c. 1870.	A. Using a United States' historical lens, analyze the opportunity costs and benefits of economic decisions on society as a whole as well as on individuals post c. 1870.	A. Using a world history lens, examine the opportunity costs and benefits of economic decisions on society as a whole as well as on individuals prior to c. 1450.	A. Using a world history lens, analyze the opportunity costs and benefits of economic decisions on society as a whole as well as on individuals post c. 1450.	A. Using a geographic lens, evaluate economic decisions to determine costs and benefits on contemporary society.	A. Examine the opportunity costs and benefits of economic decisions on society as a whole as well as on individuals and governments.

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5. People, Groups and Cultures						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 1 **Tools of Social Science Inquiry**	A. Using an American history lens, describe how peoples' perspectives shaped the sources/artifacts they created.	A. Using a United States' historical lens, describe how peoples' perspectives shaped the sources/artifacts they created.	A. Using a world history lens, describe how peoples' perspectives shaped the sources/artifacts they created.	A. Using a world history lens, describe how peoples' perspectives shaped the sources/artifacts they created.	A. Analyze material culture to explain a people's perspective and use of place.	A. Using a government lens, describe how peoples' perspectives shaped the sources/artifacts they created.
Theme 1 **Tools of Social Science Inquiry**	B. Using an American history lens, examine the origins and impact of social structures and stratification on societies and relationships between peoples.	B. Using a United States' historical lens, examine the origins and impact of social structures and stratification on societies and relationships between peoples.	B. Using a world history lens, examine the origins and impact of social structures and stratification on societies and relationships between peoples.	B. Using a world history lens, examine the origins and impact of social structures and stratification on societies and relationships between peoples.	B. Explain how the physical and human characteristics of places and regions are connected to human identities and cultures.	B. Examine the origins and impact of social structures and stratification on societies, and relationships between peoples and governments.
Theme 1 **Tools of Social Science Inquiry**					C. Compare and contrast the human characteristics within and among contemporary and historic regions over time.	

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Key Concepts and Understanding

1. History: Continuity and Change						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2	**Settlements**	**Re-Emerging America**	**Early Civilizations: Geography's Impact on History**	**Accelerated Exchange**	**World Geography and Cultures**	**Historical Foundations**
Key Concepts and Understandings	A. Trace the causes and consequences of indigenous. peoples arriving in the Americas beginning c. 15,000 BCE.	A. Compare and contrast the plans for and results of political reintegration of Southern states after the Civil War.	A. Explain the causes and results of the Agricultural Revolution in relation to the development of new and more complex societies Asia, Africa, and the Americas.	A. Explain the causes and effects of the expansion of societies in Western Africa, Byzantine Empire, Gupta India, Chinese Dynasties, and Muslim Empires.	A. Explain how regions of the world change over time in relation to historical events and trends and the human characteristics of place.	A. Trace the evolution of government in the English colonies to explain American colonists' expectations for self-rule.
Theme 2	B. Compare factors motivating Europeans to explore and settle in the New World to explain colonial diversity and regional differences in North and South America.	B. Describe the purpose, challenges, and economic incentives that impacted expansion and Westward movement.	B. Analyze the role early civilizations had in shaping concepts of government, law, and social order.	B. Compare the dominant characteristics, contributions of, and interactions among major civilizations of Asia, Europe, Africa, the Americas and Middle East in ancient and medieval times.	B. Explain how forces of nature impact historic and current conflicts and cooperation.	B. Analyze the Declaration of Independence to determine the influence of classical and Enlightenment thought on revolutionary ideals.
Key Concepts and Understandings						
Theme 2	C. Trace the causes and consequences of conflict and cooperation between Native Americans and North and South American colonists using multiple viewpoints.	C. Trace the contributions of individuals and institutions on social, political, artistic and economic development.		C. Explain how the Crusades, Scientific Revolution, Black Death, and the resulting exchanges that followed, impacted Europe and led to the Renaissance.	C. Evaluate the impact of human settlement activities on the environmental and cultural characteristic of specific places and regions.	C. Evaluate the extent to which decisions made in the Constitutional Convention were influenced by previous. models of government and experiences under British rule.
Key Concepts and Understandings						

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1. History: Continuity and Change (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2 **Key Concepts and Understandings**	D. Describe the caU.S.es and consequences of the Seven Years War as a turning point in American history.					D. Compare and contrast the structure and function of democratic governments and authoritarian governments, noting their impact on people, groups and societies.
Theme 2 **Key concepts and Understanding**	E. Analyze the concept of Manifest Destiny as a catalyst for change in American history.					

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Key Concepts and Understanding

1. History: Continuity and Change						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3	**Founding**	**Emerging Globally**	**Classical Civilizations: Foundations of Representative Government**	**The Age of Discovery and Exchange**		**Structure of Government**
Key concepts and Understandings	A. Trace the events leading to escalating conflict between Great Britain and the colonies, from multiple viewpoints.	A. Describe and evaluate the causes and consequences of United States' imperialism at home and abroad.	A. Analyze the rise and fall of classical civilizations to determine their significance to future societies.	A. Analyze the historical context of the Protestant Reformation and Scientific Revolution to explain new institutions and ways of thinking, and explain their social, political and economic impact.		A. Explain how the central debates of the Constitutional Convention were resolved.
Theme 3	B. Analyze the Declaration of Independence to determine the historical context and political philosophies that influenced its creation.	B. Describe and evaluate the motivations for United States' entry into WWI.	B. Trace the impact of conflicts, competition, and cooperation within and among classical civilizations.	B. Analyze the causes.es and consequences of European overseas expansion to determine its effect on people and cultures in Europe, Asia, Africa, and the Americas.		B. Explain how concerns over a strong central government were addressed to provide for ratification of the Constitution.
Key concepts and Understandings						
Theme 3	C. Evaluate the strengths and weaknesses of the American colonies and Great Britain to explain the American victory in the Revolution.	C. Describe and evaluate the impact of U.S. participation in WWI and the resulting peace efforts.		C. Explain the challenges and benefits of large land empires including those found in Russia, China, and the Middle East.		C. Trace the significant changes in roles, powers and size of the three branches of government.
Key concepts and Understandings						

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1. History: Continuity and Change (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3 **Key concepts and Understandings**	D. Explain the major debates that occurred during the adoption of the Constitution and their ultimate resolution.	D. Describe and evaluate the responses of United States' leaders to the challenges of the period.				D. Analyze the changing relationship between state and federal governmental powers.
Theme 3 **Key concepts and Understandings**	E. Evaluate the responses of early American leaders to the social, political, economic and religious. challenges facing the new nation.					
Theme 3 **Key concepts and Understandings**	F. Infer how events of this period led to the development of philosophies, interest groups and political parties.					

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1. History: Continuity and Change						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 4	**Expansion**	**Great Depression and World War II**	**Middle Ages-Regional Interconnectedness and Conflict**	**Age of Revolution**		**Government in Action.**
Key concepts and Understandings	A. Analyze the expansion of the United States in the early nineteenth century to trace U.S. growth and form hypotheses about future conflicts.	A. Trace the significant events and developments of the Great Depression and WWII.	A. Compare how the collapse of government and resulting instability led to the development of feudal kingdoms in Europe and Japan.	A. Evaluate the forms of republics over time to determine their implication for pre-revolutionary ideas and expectations during the Age of Revolution.		A. Trace the changing power relationships between branches of the United States government over time.
Theme 4	B. Evaluate the responses of North and South American leaders to the social, political, economic and religious. challenges of the period.	B. Evaluate the responses of United States' leaders to the challenges of the Great Depression and World War II.	B. Explain the origins and significance of the expansion of the Muslim and Mongol rule in Europe, Asia and Africa.	B. Compare and contrast causes and significant outcomes of political revolutions during this era.		B. Analyze changing ideals regarding an "active judiciary," an "active legislature" and an "active executive branch" in United States government over time.
Key concepts and Understandings						
Theme 4	C. Analyze the forced removal and resettlements of Native Americans to determine its impact on their cultures and civilizations.	C. Describe critical developments and turning points in WWII including major battles.	C. Analyze how the Crusades and Black Death affected existing societies in Europe, Asia and Africa.	C. Analyze political revolutions and reform movements in order to determine their enduring effects worldwide on the political expectations for self-government and individual liberty.		C. Explain the powers and responsibilities of citizens and institutions to address and solve problems.
Key concepts and Understandings						

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1. History: Continuity and Change (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 4 **Key concepts and Understandings**		D. Evaluate the motivations for United States' abandonment of isolationism and entry into WWII.	D. Analyze the cultures of civilizations in sub-Saharan Africa, Mesoamerica, and Andean South America.	D. Analyze responses and reactions to revolutions in order to predict future conflicts.		
Theme 4 **Key concept and Understandings**		E. Evaluate the impact of U.S. participation in WWII and the resulting new role in the post-war world at home and abroad.		E. Evaluate the impact of nationalism on existing and emerging peoples and nations post c. 1450.		

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1. History: Continuity and Change						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 5	**Conflict and Crisis**	**The American Stage**		**Modern Era**		
Key concepts and Understandings	A. Analyze political compromises over slavery in the territories to explain intensifying sectional conflicts.	A. Describe the causes, major conflicts, consequences, and enduring legacy of the Cold War.		A. Analyze world-wide imperialism in the late nineteenth and twentieth centuries to determine its causes and consequences.		
Theme 5	B. Trace the events as well as political, cultural, economic and social conditions leading to conflict between Northern and Southern states.	B. Evaluate the responses of United States' leaders to the challenges of global tensions.		B. Trace the origins, and relationships among the world wars, revolutions, and global conflicts of twentieth century to determine their impacts on the world today.		
Key concepts and Understandings						
Theme 5	C. Describe critical developments and turning points in the Civil War, including major battles.	C. Trace changes in military strategies and technologies as a response to the challenges of the Cold War.		C. Analyze the varying processes of colonization and decolonization to compare their impact on and legacies in the world today.		
Key concepts and Understandings						
Theme 5		D. Analyze the origins, goals, and key events of the continuing U.S. movements to realize equal rights for women, African Americans and other minorities.				
Key concepts and Understandings						

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1. History: Continuity and Change						
	6-8 American History	9-12 American	6-8 World History	9-12 World History	6-8 Geography	9-12 Government
Theme 6 **Key concepts and Understandings**		Contemporary America A. Analyze the fall of the Soviet Union to determine its effect on U.S. foreign policy and its relationships with the rest of the world.				
Theme 6 **Key concepts and Understandings**		B. Trace the origins of twenty-first century conflicts to understand U.S. policies and actions.				
Theme 6 **Key concepts and Understandings**		C. Evaluate the responses of United States' leaders to the challenges of global tensions.				
Theme 6 **Key concepts and Understandings**		D. Evaluate how the ability to access and distribute information affects individuals, groups, industry, and governments in the latter 20th and early 21st centuries.				

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2. Governmental Systems and Principles						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2	**Settlements**	**Reemerging America**	**Early Civilizations: Geography's Impact on History**	**Accelerated Exchange**	**World Geography and Cultures**	**Historical Foundations**
Key concepts and Understandings	A. Compare the governmental systems of European powers to determine their effect on colonization in the Americas.	A. Analyze the period of Reconstruction to determine its effect on separation of powers checks and balances power of the central government.	A. Explain the origins, functions, and structure of monarchies, theocracies, city states, empires and dynasties.	A. Compare and contrast governmental systems, including monarchy, oligarchy, dynasty, and theocracy.	A. Using a geographic lens, analyze the laws and governmental systems of a place in order to determine their effects on individuals, groups, and institutions.	A. Analyze how the codification of law impacted early civilizations and shaped enduring concepts government, law, and social order.
Theme 2	B. Explain how the founding of European colonies influenced their governments and expectations for self-rule.	B. Evaluate the effectiveness of major legislation, Constitutional amendments, and court decisions relating to freed slaves.	B. Distinguish the powers and responsibilities of subjects and political leaders in monarchies, theocracies, city-states, and empires.	B. Explain the influence of the classical revival on governmental systems including their source of power, how leaders are selected, and how decisions are made.	B. Draw conclusions about how laws impact the development of a place and how a place impacts the development of laws.	B. Apply the concepts of natural law, social contract, due process of law, and popular sovereignty to explain the purposes and legacy of the Declaration of Independence.
Key concepts and Understandings						
Theme 2	C. Analyze local and colonial governments to trace the factors influencing their structure and function.	C. Analyze the expansion of political parties, interest groups and political machines to determine their effect on United States' government and policy.	C. Explain how the codification of law impacted early civilizations.			C. Describe the strengths and weaknesses of the Articles of Confederation to explain its failure as a national government.
Key concepts and Understandings						

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2. Governmental Systems and Principles						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3	**Founding**	**Emerging Globally**	**Classical Civilizations: Foundations of Representative Governments**	**Age of Discovery and Change**		**Structure of Government**
Key concepts and Understandings	A. Evaluate the impact of the French and Indian Wars on Great Britain's approach to colonial rule.	A. Analyze how political developments and Constitutional Amendments of the period altered the relationship between government and people.	A. Explain the origins, functions, and structure of governmental systems within classical civilizations.	A. Describe how governments and institutions of the Eastern and Western Hemispheres changed to deal with the challenges and opportunities of an interconnected world.		A. Apply the concepts of due process of law, popular sovereignty, rule of law, representation, and federalism to explain the purpose and legacy of the Constitution.
Theme 3	B. Apply the concept of representation to the conflict between the colonies and Great Britain.	B. Describe the intended and unintended consequences of progressive reforms and government responses in the first three decades of the twentieth century.	B. Analyze direct democracy and representative democracy in order to apply the concepts of majority rule, minority rights and civic duty.	B. Analyze the style and function of a leader to determine his/her impact on a governmental system.		B. Analyze the Articles of Confederation and the Constitution to determine their success in implementing the ideals of the Declaration of Independence.
Key concepts and Understandings						
Theme 3	C. Apply the principles of inalienable rights, popular sovereignty, natural rights, and social contract to evaluate the purpose and legacy of the Declaration of Independence.	C. Analyze the changing social norms and conflicting mores which emerged during the first three decades of the twentieth century.	C. Explain how the rule of law developed from a written code of laws as well as concepts of separation of powers and checks and balances.			C. Analyze the unique roles and responsibilities of the three branches of government to determine how they function and interact.
Key concepts and Understandings						

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2. Governmental Systems and Principles (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3 **Key concepts and Understandings**	D. Evaluate the successes and challenges of the Articles of Confederation to explain the need for a Constitutional Convention.					D .Describe and give examples of how the constitutional principle of checks and balances limits the powers of government and leaders.
Theme 3 **Key concepts and Understandings**	E. Apply the principles of rule of law, representation, separation of powers, checks and balances, and federalism to explain the purposes and functions of the Constitution.					E. Explain how the Bill of Rights and subsequent amendments limit the power of government, protect individual liberty, and provide for equality under the law.
Theme 3 **Key concepts and Understandings**	F. Describe the origins and purposes of the Bill of Rights and evaluate the enduring significance of these concepts to the preservation of individual rights and liberties.					F. Compare the structure and functions of local, state and federal governments.
Theme 3 **Key concepts and Understandings**	G. Examine elections, issues, laws, and events of this time period to explain how the concepts of judicial review, elastic clause, and an amendment process were established or used to meet challenges.					

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2. Governmental Systems and Principles						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 4	**Expansion**	**Great Depression and World War II**	**Regional Interconnectedness and Conflict**	**Age of Revolutions**		**Government in Action**
Key concepts and Understandings	A. Trace the expansion of voting rights and patterns and explain how it impacted elections and political movements.	A. Analyze the relationships among the branches of government to explain conflicts and the changing power of each.	A. Explain the origins, functions, and structure of governmental systems within civilizations.	A. Analyze the key ideas of Enlightenment thinkers to explain the development of ideas such as natural law, natural rights, social contract, due process, and separation of powers.		A. Evaluate the role and influence of contemporary political parties on government.
Theme 4	B. Analyze landmark Supreme Court cases to determine the effect on the definition and expansion of federal power.	B. Evaluate how the programs and policies of the New Deal and WWII changed the relationships among the government, groups, and individuals.	B. Explain how the rule of law is further developed by the Magna Carta, and other documents and traditions including limited government and due process.	B. Compare and contrast limited and absolute governments and the extent of their impact on individuals and society.		B. Explain a citizen's legal obligations, as well as opportunities for, engaging with and using local, state, and federal governments to shape decision-making.
Key concepts and Understandings						
Theme 4	C. Explain how the principles of rule of law, separation of powers, checks and balances, and federalism were impacted by Jacksonian Democracy.	C. Determine the lasting impact of the New Deal and WWII on principles of government, including separation of powers, checks and balances judicial review, and limited government.	C. Analyze the conflict and cooperation between religions and the states to determine their impact on people and societies.	C. Compare and contrast government systems resulting from political revolutions.		C. Compare the various. processes pertaining to the selection of political leaders at the federal, state, and local level.
Key concepts and Understandings						

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2. Governmental Systems and Principles						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 5	**Conflict and Crisis**	**The American Stage**		**The Modern Era**		
Key concepts and Understandings	A. Compare responses of government systems in the North and South to major legislation, executive orders, and court decisions before, during and immediately after the Civil War.	A. Analyze treaties, agreements, and international organizations to determine their impact on world challenges along with national and international order.		A. Compare and contrast evolving governmental systems, including monarchy, theocracy, totalitarianism and representative government, to determine their impact on society.		
Theme 5	B. Analyze federalism and popular sovereignty to explain peoples' expectations of the role of government and their place in governance.	B. Determine the lasting impact of shifting interpretations of governmental and constitutional principles including separation of powers, checks and balances, rule of law, judicial review, and limited government.		B. Analyze treaties, agreements, and international organizations to determine their impact on world challenges along with national and international order.		
Key concepts and Understandings						
Theme 5	C. Analyze the election of 1860 to explain the development of political parties and how they influence the selection of leaders.	C. Describe and evaluate the extent to which Supreme Court cases and legislation served to expand equal rights during this era.				
Key concepts and Understandings						

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Key Concepts and Understanding

Theme 5 **Key concepts and Understandings**	D. Compare and contrast the governmental systems of the U.S. North and South to determine the strengths and weaknesses of federal and confederal systems.	D. Analyze the motivations for and results of changing concepts of the federal government in post-Civil War America.				

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2. Governmental Systems and Principles						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 6 **Key concepts and Understandings**		**Contemporary America** A. Evaluate the effectiveness of organizations, groups, agreements, and treaties to promote cooperation and maintain international order.				
Theme 6 **Key concepts and Understandings**		B. Determine the lasting impact of this period on principles of government including separation of powers, executive orders, checks and balances, rule of law, judicial review, and limited government.				
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 6 **Key concepts and Understandings**		C. Evaluate the changing roles and influence of political parties and interest groups on governmental decision-making.				

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3. Geographical Study						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2	**Settlements**	**Re-emerging America**	**Early Civilizations: Geography's Impact on History**	**Accelerated Change**	**World Geography and Cultures**	**Historical Foundations**
Key concepts and Understandings	A. Analyze diverse Native American cultures in North, Central and South America to explain the ways they adapted to their various. environments.	A. Evaluate the causes, patterns, and outcomes of internal migrations and urbanization.	A. Describe how physical characteristics of river valleys supported permanent settlements and the rise of early civilizations.	A. Analyze physical geography to explain how regions are connected or isolated from each other.	A. Describe how physical processes shape the environment of a place.	A. Analyze how geography of North America influenced the governmental systems which developed there.
Theme 2	B. Analyze the geography of colonial regions in North and South America to explain their cultural, social and economic differences.	B. Evaluate the effects of Westward expansion on the production, distribution, and allocation of resources and on the environment.	B. Analyze the cultural characteristics of civilizations to explain how they are similar and different.	B. Compare and contrast geographic regions by examining the cultural characteristics of European, African, and Asian and American societies.	B. Describe a variety of ecosystems, and explain where they may be found.	
Key concepts and Understandings						
Theme 2	C. Compare major patterns of population distribution, demographics and migrations in the United States and the impact of those patterns on cultures and community life.		C. Explain how various. characteristics of civilizations are connected to identities and cultures.		C. Explain how human-environmental interactions shape people and places.	
Key concepts and Understandings						
Theme 2					D. Explain how the movement of people, goods, and ideas impact world regions.	
Key concepts and Understandings						

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Key Concepts and Understanding

3. Geographical Study						
	6-8 American	**9-12 American**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3 **Key concepts and Understandings**	**Founding** A. Draw conclusions about regional conflict and cooperation as a consequence of physical geography.	**Emerging Globally** A. Describe how the expansion of transportation and technological developments influenced acquisition of new territories.	**Classical Civilizations: Founding of Representative Government** A. Explain the significance of physical geography to the development of classical civilizations.	**Age of Discovery and Exchange** A. Analyze physical geography to explain the availability and movement of resources.		**Structure of Government**
Theme 3 **Key concepts and Understandings**	B. Evaluate the relationships among population, representation, and their effect on power in the new government.		B. Identify the effect of natural forces upon human activities.	B. Describe major changes in patterns of migration and human settlement in Africa, Asia and the Americas resulting from European expansion.		
Theme 3 **Key concepts and Understandings**	C. Compare major patterns of population distribution, demographics and migrations in the United States during this era c. 1763-1812.					

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3. Geographical Study						
	6-8 American	**9-12 American**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 4	**Expansion**	**Great Depression and World War II**	**Middle Ages- Regional Interconnectedness and Conflict**	**Age of Revolution**		**Government in Action**
Key concepts and Understandings	A. Trace the changing boundaries of the United States and describe how it represents the changing relationships with its neighbors and Native Americans.	A. Describe and evaluate the consequences, both intended and unintended, of environmental decisions such as conservation movements, dam construction and the Dust Bowl.	A. Explain how the spread of cultural patterns and economic decisions shape and are shaped by environments.	A. Explain how and why places changed as a result of revolutions and why various people perceive the same place in varied ways.		A. Analyze state and federal electoral results to determine the influence of social, regional and demographic characteristics.
Theme 4	B. Assess Manifest Destiny in relation to push-pull factors, geographic features, and human environmental interactions to determine their influence on the movement of goods, people and ideas.	B. Analyze the impact of geography in the European and Pacific theaters during WWII to compare war efforts and strategies.	B. Explain how physical geographic characteristics influence human identities and cultures.	B. Extrapolate the push-pull factors created by revolutions to determine their impacts on population distribution, settlements, and migrations.		
Key concepts and Understandings						
Theme 4	C. Compare major patterns of population distribution, demographics and migrations in the United States and the impact of those patterns on cultures and community life in this time period.			C. Explain the significance of new technologies in expanding people's' capacity to modify the physical environment and their intended and unintended consequences.		
Key concepts and Understandings						

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3. Geographical Study						
	6-8 American History	**9-12 American**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 5	**Conflict and Crisis**	**The American Stage**		**The Modern Era**		
Key concepts and Understandings	A. Analyze the U.S. geography of North, South, and West in order to explain regional cultural, social and economic differences.	A. Evaluate the causes and consequences of demographic shifts and internal migrations.		A. Analyze physical geography to explain the availability and movement of resources.		
Theme 5	B. Evaluate the significance of geography on the conduct of the war and strategy of the North and South.	B. Explain how the physical and human characteristics of places determined their influence on or importance to Cold War events.		B. Explain how technology has reduced barriers and expanded peoples' capacity to make use of, or modify, the physical environment.		
Key concepts and Understandings						
Theme 5	C. Compare major patterns of population distribution, demographics and migrations in the United States and the impact of those patterns on cultures and community life in this time period.			C. Evaluate the relationship between technological and scientific advancements and increasing global interaction.		
Key concepts and Understandings						
Theme 5				D. Analyze major demographic patterns to determine their effect on the human and physical systems.		
Key concepts and Understandings						

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3. Geographical Study						
	6-8 American History	9-12 American History	6-8 World History	9-12 World History	6-8 Geography	9-12 Government
Theme 6 **Key concepts and Understandings**		**Contemporary America** A. Analyze physical geography to understand the availability and movement of resources in this era.				
Theme 6 **Key concepts and Understandings**		B. Evaluate the relationship between technological and scientific advancements, in communication, transportation, production, and increasing global interaction in this era.				
Theme 6 **Key concepts and Understandings**						

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4. Economic Concepts						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2	Settlements	Re-emerging America	Early Civilizations: Geography's Impact on History	Accelerated Exchange	World Geography and Cultures	Historical Foundations
Key concepts and Understandings	A. Compare sources of labor, emerging economic production, and availability of land in the New World and their impact on economic development in North and South America.	A. Evaluate how the goals of Reconstruction impacted the economic recovery and growth of regions.	A. Using a world history lens, explain how the concept of economic surplus. led to trade and the emergence of specialized labor.	A. Analyze the flow of goods and ideas along ocean and overland trade routes to explain their contributions to economic success or failures of societies in Europe, Africa, Middle East, India, the Americas and China.	A. Analyze resource availability to explain its caU.S.es and impacts on conflict or cooperation.	A. Analyze the impact of economics and economic theories on the formation of United States governmental ideals, principles and structures.
Theme 2	B. Analyze the mercantile system to explain colonial responses to economic control by European nations including Great Britain.	B. Explain how the expansion of industrialization, transportation and technological developments influenced different regions and the relationship between those regions.	B. Explain how standardization affects the early stability of a society.		B. Analyze patterns of resource distribution to explain the consequences of personal and public economic decisions.	
Key concepts and Understandings						
Theme 2		C. Apply the concepts of natural resources, capital, labor, investment, profit, and *laissez-faire* policies to explain the growth of American industry.			C. Use economic concepts such as GDP, scarcity, inflation, to describe and compare places and regions.	
Key concepts and Understandings						

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4. Economic Concepts (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2		D. Analyze the developing interconnectedness among people, big business, labor unions and governments to determine their effect on individuals, society, and public policy.			D. Analyze economic systems to explain their impact on peoples' behavior and choices.	
Key concepts and Understandings						

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4. Economic Concepts						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3	**Founding**	**Emerging Globally**	**Classical Civilizations: Foundations of Representative Government**	**The Age of Discovery and Exchange**		**Structure of Government**
Key concepts and Understandings	A. Describe the function and purpose of taxes imposed by Great Britain following the Seven Years War, evaluating colonial responses to them.	A. Analyze emerging American involvement in world trade to determine its influence on foreign policy and government actions.	A. Describe trade patterns and how they influence the movement of resources, goods and services.	A. Compare the extent, interaction and impact of African, European, American and Asian trade networks.		A. Compare trade, monetary policy, and taxation under the Articles of Confederation and the Constitution.
Theme 3	B. Compare the emerging economic characteristics of the nation and colonial regions to make predictions about future expansion and conflict.	B. Apply the economic concepts of natural resources, markets, supply and demand, labor, and capital to analyze the costs and benefits of imperialism.	B. Explain how standardization impacts the stability of a civilization.	B. Compare the origins, development and effects of coercive labor systems in Asia, Africa, Europe and the Americas.		B. Analyze the changing roles of government in the economy throughout United States history.
Key concepts and Understandings						
Theme 3	C. Trace the development of the American economic system to explain how taxes, tariffs, and monetary policies were used to establish sustainability and growth.	C. Trace the changing relationship between government and business through economic regulation and deregulation.	C. Explain how political and economic stability affects the well-being of individuals and society.	C. Describe how new sources of wealth, resulting from increasing global interactions, impacted cultures and civilizations.		
Key concepts and Understandings						

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4. Economic Concepts						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 4	**Expansion**	**Great Depression and World War II**	**Middle Ages-Regional Interconnectedness and Conflict**	**Age of Revolutions**		**Government in Action**
Key concepts and Understandings	A. Analyze the origins and characteristics of coercive labor systems, including slavery, and their impact on economic and political expansion.	A. Apply the economic concepts of innovation, supply and demand, barriers to trade, labor, business cycle, credit, and wage gap to explain the causes of the Great Depression.	A. Explain how inter-regional trade intensified the exchange of goods, ideas and people.	A. Analyze the origins and characteristics of laissez faire, market, mixed, and command economic systems to determine their effects on personal, social, and political decisions.		A. Analyze the role that people, businesses, and government play in taxation and spending required to maintain the public good.
Theme 4	B. Explain how the expansion of industrialization, transportation and technological developments influenced different regions and the relationship among those regions.	B. Describe the possible consequences, both intended and unintended, of government policies to improve economic conditions and increase productivity.		B. Examine the connections among natural resources, entrepreneurship, innovation, labor, and capital to determine their effects on an industrial economy in Europe, Africa, Asia and the Americas.		
Key concepts and Understandings						
Theme 4	C. Trace the continued development of the American economic system to explain how taxes, tariffs, and monetary policies were used to establish sustainability and growth.					
Key concepts and Understandings						

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4. Economic Concepts						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 5	**Crisis and Conflict**	**The American Stage**		**The Modern Era**		
Key concepts and Understandings	A. Explain how the expansion of industrialization, transportation, and technological developments influenced different regions and the relationship among those regions.	A. Trace the developing complexities of the American economy in the second half of the twentieth century.		A. Analyze economic systems such as market, mixed, and command to determine their impact on economic growth, labor markets, rights of citizens, the environment, and resource allocation in and among regions.		
Theme 5	B. Compare the economic strengths and weaknesses of the North and South before, during and immediately after the Civil War.	B. Compare the role of governments in various. economic systems to explain competing world views.		B. Evaluate the response of individuals, groups, and governments to economic, environmental, health, and medical challenges to understand how systems change and evolve over time.		
Key concepts and Understandings						
Theme 5		C. Describe the consequences, both intended and unintended, of government policies to improve individual and societal conditions.				
Key concepts and Understandings						

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4. Economic Concepts						
	6-8 American History	9-12 American History	6-8 World History	9-12 World History	6-8 Geography	9-12 Government
Theme 6		**Contemporary America**				
Key concepts and Understandings		A. Apply the economic concepts of innovation, supply and demand, international trade, labor, business cycle, and credit to evaluate global interdependence along with economic and security challenges.				

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5. People, Groups, and Cultures						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2	**Settlements**	**Re-Emerging America**	**Early Civilizations: Geography's Impact on History**	**Accelerated Exchange**	**World Geography and Cultures.**	**Historical Foundations**
Key concepts and Understandings	A. Analyze the religious, cultural, political and intellectual developments of Spanish, Portuguese, British and French regions to explain the development of diverse cultures throughout the Americas.	A. Analyze patterns of immigration to determine their effects on economic, cultural, and political developments.	A. Explain the significance of monotheistic and polytheistic religions to the social and political order of early civilizations.	A. Explain how scientific and technological advancements impacted the interconnectedness within and among regions.	A. Compare and contrast the human characteristics within and among regions.	A. Analyze the varying perspectives of individuals and groups to explain emerging divisions and political philosophies as the United States was founded.
Theme 2	B. Analyze the religious, cultural, and intellectual developments of the European colonies to explain the development of regionalism and an American identity.	B. Evaluate the short and long-term impact of western expansion on native American and other minority populations.	B. Describe the origins, structure, and essential beliefs of Judaism, Hinduism, and Buddhism.	B. Analyze the intellectual, architectural, and artistic achievements of the Renaissance resulting from the rebirth of Classical ideas.	B. Explain how groups and institutions of a place develop to meet peoples' needs.	
Key concepts and Understandings						
Theme 2	C. Compare and contrast the interaction of European settlers with Native Americans in both North and South America.	C. Describe and evaluate laws, events, and perspectives to determine the extent to which individuals and groups could participate in, and realize, the promise of American ideals.	C. Describe how the world view of social groups and institutions influence culture and define the position of the individual within various societies.	C. Analyze the historic development of Islam as well as the expansion of Christianity, Islam, Hinduism and Buddhism in order to explain their transformations and roles in conflict and cooperation.	C. Analyze the relationship between the physical environments and cultural traditions to determine their impact on individuals, groups, and institutions.	
Key concepts and Understandings						

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5. People, Groups, and Cultures (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 2 **Key concepts and Understandings**		D. Explain the varying impact of industrialization on culture, work, education and other social institutions.	D. Analyze scientific, technological, intellectual, and artistic advancements to determine the legacy of the ancient civilizations.		D. Analyze religion and belief systems of a place to determine their varying impact on people, groups, and cultures.	
Theme 2 **Key concepts and Understandings**		E. Trace the changing motivations for, nationalities of, and responses to immigration and to immigrants coming to the United States.			E. Describe how a peoples' culture is expressed through their art, architecture and literature.	

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Key Concepts and Understanding

5. People, Groups, and Cultures						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3	**Founding**	**Emerging Globally**	**Classical Civilizations: Foundations of Representative Government**	**The Age of Discovery and Exchange**		**Structure of Government**
Key concepts and Understandings	A. Analyze the perspectives of diverse individuals and groups to explain the extent of their support for the Revolutionary War.	A. Explain the motivation for social and political reforms and their impact on the ability of individuals and groups to realize the promise of American ideals.	A. Explain the significance of art, mythology, literature and philosophy to the culture and social order of classical civilizations.	A. Analyze the exchange of people, goods and ideas to determine their impact on global interdependence and conflict.		A. Analyze the varying perspectives of individuals and groups regarding the development of the American governmental system to explain emerging divisions and political philosophies.
Theme 3	B. Analyze populations of colonies/states to explain how their cultural, religious, social, and economic characteristics influenced the emergence of regional identity.	B. Analyze the changing relationship between individuals and their place in society including women, minorities, and children.	B. Analyze scientific, technological, intellectual, and artistic advancements to determine the legacy of the classical civilizations.	B. Determine the extent and impact of cultural exchange, interaction, and disruption that resulted from the Columbian Exchange and European expansion in the Eastern and Western Hemispheres.		B. Evaluate the intended and unintended impact of government decision-making on individuals, groups, and society.
Key concepts and Understandings						

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5. People, Groups, and Cultures (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 3 **Key concepts and Understandings**	C. Compare and contrast the perspectives of individuals and groups regarding the development of the American governmental system to explain emerging divisions and political philosophies.	C. Analyze the technological, artistic, intellectual, economic, and cultural changes of the first three decades of the 20th century to determine their effects on individuals and groups.	C. Analyze the extent and impact of cultural diffusion that results from empire building.	C. Assess changing ideas of class, ethnicity, race, gender, and age to affect a person's roles in society and social institutions.		
Theme 3 **Key concepts and Understandings**	D. Evaluate laws, events, and perspectives to determine the extent to which individuals and groups could participate in, and realize, the promise of American ideals.	D. Assess the impact of WWI related events~~,~~ on the formation of "patriotic" groups, pacifist organizations, and the struggles for and against racial equality, and diverging women's roles in the United States.	D. From a historical perspective, explain the origin, structure, spread, and significant beliefs of Christianity.	D. Trace the development and impact of religious. reform on exploration, interactions and conflicts among various. groups and nations.		
Theme 3 **Key concepts and Understandings**	E. Analyze the artistic and intellectual achievements of early Americans to provide evidence of an emerging American identity.					

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5. People, Groups, and Cultures						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 4	**Expansion**	**The Great Depression and World War II**	**Middle Ages Regional Interconnectedness and Conflict**	**Age of Revolutions**		**Government in Action**
Key concepts and Understandings	A. Evaluate the effectiveness of various. reform movements, laws, and events to determine their impact on the promise of American ideals.	A. Analyze the artistic and intellectual achievements of the 1930s to understand the human costs of the Great Depression.	A. Analyze scientific, technological, intellectual, and artistic advancements to determine the legacy of European, African and Mesoamerican civilizations.	A. Analyze the intellectual, artistic, and literary achievements of the Enlightenment and ensuing revolutions in order to determine how they challenged the status. quo.		A. Explain how political parties and interest groups reflect diverse perspectives and are influenced by individuals.
Theme 4	B. Analyze the experiences of enslaved peoples in North and South America to determine their cultural impact and enduring consequences.	B. Assess the impact of war-related events on women's roles, family structures, religious identity, education, commerce, entertainment, agriculture and other elements of the home front.	B. From a historical perspective, explain the origin, structure, spread, and significant beliefs of Islam.	B. Analyze new technologies and new forms of energy to determine their effects on the lives of individuals, groups, and societal organization.		B. Evaluate factors that shape public opinion on elections and policy issues.
Key concepts and Understandings						
Theme 4	C. Analyze diverse artistic, intellectual, and religious. movements to show how they reflect the aspirations and beliefs of the developing nation.	C. Evaluate the effects of the Great Depression and WWII on women, families, and minorities.	C. Describe how the world view of individuals, social groups, and institutions change as a result of connections among regions.	C. Analyze social and educational reform movements to determine their impact on the challenges brought about by revolutions.		
Key concepts and Understandings						

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5. People, Groups, and Cultures (cont'd)						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 4 **Key concepts and Understandings**	D. Describe the culture and accomplishments of native Americans and African Americans in the ways they responded to American expansion.	D. Analyze the impact of the Great Depression and World War II on the arts and culture.	D. Analyze the caU.S.es and effects of the changing roles of class, ethnicity, race, gender and age on world cultures prior to c. 1450.	D. Analyze political, social, cultural, artistic and economic revolutions to determine how they impacted concepts of class, race, tribe, slavery, and caste affiliation.		D. Predict the consequences that occur when institutions fail to meet the needs of individuals and groups, and when individuals fail to carry out their personal responsibilities.
Theme 4 **Key concepts and Understandings**	E. Analyze patterns of immigration to determine their impacts on the cultural, social, political and economic development of the United States.					

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5. People, Groups, and Cultures						
	6-8 American History	**9-12 American History**	**6-8 World History**	**9-12 World History**	**6-8 Geography**	**9-12 Government**
Theme 5	**Conflict and Crisis**	**The American Stage**		**The Modern Era**		
Key concepts and Understandings	A. Determine the impact of the ideas contained in major speeches, literature, music, and writings from diverse individuals on the varying perspectives of American people, groups and movements.	A. Evaluate the effect of the internal tensions caused by the Cold War on societal groups, organizations, and government.		A. Analyze causes and patterns of human rights violations and genocide and suggest resolutions for current and future conflicts.		
Theme 5	B. Describe the impact of scientific and technological advances on the outcome of the war and its effect on people and diverse groups.	B. Analyze the scientific, technological, artistic, intellectual, economic, political, and cultural changes of the post-WWII period to determine their effects on individuals and groups.		B. Analyze the process of globalization to determine its effects on global conflict and cooperation.		
Key concepts and Understandings						
Theme 5	C. Analyze the evolution of the women's movement to trace its continued development and evaluate its impact.	C. Evaluate social reforms to determine their impact on the ability of individuals and groups to realize the promise of American ideals.		C. Analyze the technological, intellectual, artistic, and literary achievements of the modern era to determine how society reflects and challenges the status. quo.		
Key concepts and Understandings						

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Theme 5 **Key concepts and Understandings**	D. Analyze the evolution of the Abolitionist Movement to trace its continued development and evaluate its impact.	D. Analyze push-pull factors to explain changing immigration patterns and their continuing effects on the United States.		D. Analyze the causes and effects of the changing roles of class, ethnicity, race, gender and age on world cultures post c. 1450.		
Theme 5 **Key concepts and Understandings**	E. Trace the development of African American culture in non-slave states and in the context of slavery.	E. Describe and evaluate the powers and responsibilities of citizens and institutions to address and solve United States' problems c. post 1750.		E. Evaluate the powers and responsibilities of citizens and institutions to address and solve world problems c. post 1450.		

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5. People, Groups, and Cultures						
	6-8 American History	9-12 American History	6-8 World History	9-12 World History	6-8 Geography	9-12 Government
Theme 6		**Contemporary America**				
Key concepts and Understandings		A. Analyze scientific, technological, artistic, intellectual, economic, political, and cultural changes during this era to determine their effects on individuals, groups and society.				
Theme 6		B. Analyze push-pull factors to explain changing immigration patterns and their continuing effects on the United States during this era.				
Key concepts and Understandings						
Theme 6		C. Assess the response of individuals, groups, and the government to societal challenges to understand how systems change and evolve over time.				
Key concepts and Understandings						

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